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THE U.S. MARKET FOR SMOKED SALMON:

IMPLICATIONS FOR THE CANADIAN INDUSTRY

Economic and Commercial Analysis

Report No. 70

Fisheries and Oceans Pêches et Océans

Canada

THE U.S. MARKET FOR SMOKED SALMON:

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ABSTRACT

A telephone survey of a random sample of 691 firms was conducted to obtain information on the market for smoked salmon. Three market segments (gourmet stores, seafood retail stores, and restaurants) in six regions (New England, New York, the Mid-Atlantic, the South, Chicago and the West) in the United States were examined. The results of the study provide information on the prevalence of smoked salmon in the three market segments and the six regions, the types of smoked salmon products currently being carried, preferences for key smoked salmon characteristics, sales trends, seasonality of smoked salmon sales, and current wholesale price levels. Results from this study have direct implications for Canadian producers of smoked salmon in terms of future product development and effective marketing of Canadian smoked salmon in the United States.

RESUME

On a effectué une enquête téléphonique d'un échantillon aléatoire de 691 firmes afin d'obtenir des informations sur le marché du saumon fumé. Trois segments du marché (épiceries fines, détaillants de fruits de mer et restaurants) de six régions des E.-U. (Nouvelle-Angleterre, New York, Mid-Atlantic, le Sud, Chicago et l'Ouest) ont été examinés. Les résultats de l'étude fournissent des informations sur l'abondance du saumon fumé dans ces trois segments du marché et ces six régions, sur les types de produits de saumon fumé présentement disponibles, sur les préférences concernant les principales caractéristiques du saumon, ansi que sur les prix actuels en gros. Les résultats de cette étude ont des implications directes pour les producteurs canadiens de saumon fumé pour ce qui est du développement futur du produit et de la commercialisation efficace du saumon fumé canadien aux Etats-Unis.

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EXECUTIVE SUMMARY

Background

Imports of smoked salmon into the United States have grown 180 percent from 1985 to 1989 from 323 MT in 1985 to 902 MT in 1989, while domestic production has averaged approximately 5,400 MT annually. As import volume has increased, the average price of imported smoked salmon has increased 8 percent from US$6.78 in 1985 to US$7.29 in 1989. Norway ranked first in import volume with 51 percent of the total volume in 1989, the United Kingdom ranked second, and Canada ranked third. Canada had the largest growth in smoked salmon imports into the United States of any country, with a 325 percent increase in volume from 1985 to 1989.

Methodology

A telephone survey of 691 firms in the United States was conducted in February and March 1990. A random sample of gourmet stores, seafood retailers, and restaurants was selected from published business listings. Target selection percentages of 20 percent of gourmet stores, 20 percent of seafood retailers, and 2 percent of restaurants were applied to 13 metropolitan areas in 6 regions: New England (Boston, Rhode Island, Hartford-New Haven), New York (New York City), Mid-Atlantic (Philadelphia, Baltimore), South (Miami, Dallas), Chicago, and West (Denver, Los Angeles, San Francisco, Seattle).

Results

The overall response rate to the survey was 60 percent. The major findings are summarized below:

1) Overall, 20 percent of firms responding carried smoked salmon, and most carried it in conjunction with other smoked seafood. Gourmet stores were most likely to carry smoked salmon while restaurants were least likely. New England, New York City and the West had the greatest presence of smoked salmon.

2) Sides of smoked salmon and pre-slicing were the predominant product form characteristics in all market segments and regions. Pre-sliced sides and uncut sides were the top two product forms overall.

3) Scottish style was the most common form of preparation carried by firms in the survey. Northwest style, hot-smoked salmon was most common in the West region, while Scottish style was most common in the Eastern and Southern regions.

4) A vacuum pack was the dominant form of packaging among all market segments and regions surveyed.

5) Package weight patterns correlated closely with product form patterns. The most common package weight was one pound or more which corresponds to a side of smoked salmon. Of the smaller package weights, one quarter pound (4 oz. or 113 g.) was the most common.

6) Smoked salmon produced from Atlantic salmon was more prevalent than smoked products produced from Pacific salmon. Smoked Atlantic salmon was dominant in all market segments, and in all regions but the West and Chicago, where several species of Pacific salmon (including King, King or Sockeye, and unspecified Pacific salmon species) were as prevalent, or, in the case of the West, slightly more prevalent than Atlantic salmon.

7) Among the responding firms, there was more awareness of the region of origin of smoked salmon products carried than of their brand. Norway was the country of origin most often identified.

8) Smoked salmon was by far the best selling smoked seafood of all the types that firms carried. Scottish style was the best selling smoked salmon overall, but Northwest style was the best selling in seafood retail stores and, among regions, in the West.

9) In general, the majority of firms expressed indifference toward farmed versus wild salmon for smoked salmon products. However, a majority of firms preferred Atlantic salmon over Pacific salmon.

10) Consistent with product forms, most firms surveyed preferred pre-sliced versus uncut, and a majority favored sides over portions.

11) On all market segments and all regions surveyed, a larger percentage of firms preferred Scottish style cold-smoked salmon to Northwest style hot-smoked salmon.

12) The majority of firms surveyed indicated that there was a peak sales season which generally occurred during the winter holidays or from Thanksgiving to New Year. Gourmet store sales were highly seasonal, while most restaurants surveyed indicated that their smoked salmon sales were not. Among the regions, most of the firms responding had seasonal sales, with the exception of those surveyed in the South, where non-seasonality prevailed, and in New England, where firms were equally divided among those which cited seasonality of sales and those which did not.

13) Average wholesale prices paid by firms ranged from US$9.30 per pound to $14.35 per pound depending on region and market segment. The highest average wholesale price paid by firms was in the gourmet segment and in New England and New York City. The lowest was in the seafood retail segment and in the South.

14) Based on a March 1989 survey of Northeast smoked salmon buyers, the gourmet/deli segment was less price sensitive than the seafood retail or wholesale segments. The gourmet/deli segment in that survey was more likely to purchase smoked salmon at higher prices than seafood wholesalers or retailers.

CHAPTER 1

INTRODUCTION

1.1. BACKGROUND

Smoked salmon is being increasingly viewed as a premium value-added product for farmed and wild salmon. With a rapidly expanding world supply of salmon, salmon producers are looking more and more to value-added products to expand the market for salmon. Despite a growing interest in the U.S. market for smoked salmon, to date, there has been little, if any, publicly conducted market research on this aspect of the salmon market. This is surprising in light of the fact that Nova salmon in the Northeast U.S., hot-smoked in the Pacific Northwest, and Scottish-style cold-smoked have had a long-standing presence in the marketplace.

Domestic production of smoked salmon in the U.S. averaged approximately 5,403 metric tons per year during the period 1983 to 1986 (the most recent figures available) with an average value of US$60 million (U.S. Department of Commerce 1987). Meanwhile, U.S. imports of smoked salmon grew 180 percent during the period 1985 to 1989 from 323 metric tons to 902 metric tons (U.S. Department of Commerce 1990) (Exhibit 1.1). In addition, the average nominal dollar per pound value of smoked salmon imports increased 8 percent from US$6.78 per pound in 1985 to US$7.29 per pound in 1989. Norway is by far the largest exporter of

smoked salmon to the U.S., comprising 51 percent of the total U.S. imports of smoked salmon in 1989 (Exhibit 1.2). With its large growth in farmed salmon production, Norway exhibits one of the largest increases of any country in smoked salmon exports to the U.S. with a 291 percent increase from 1985 to 1989 (Exhibit 1.3). The United Kingdom ranks second in current import volume with 18 percent of total U.S. imports of smoked salmon in 1989 and shows a relatively modest 43 percent increase in imports 1985 to 1989. Canada ranks third with 17 percent of the total U.S. imports of smoked salmon and exhibits the largest growth of any country with a 325 percent increase in volume from 1985 to 1989, and a 22 percent increase in average dollar per pound value.

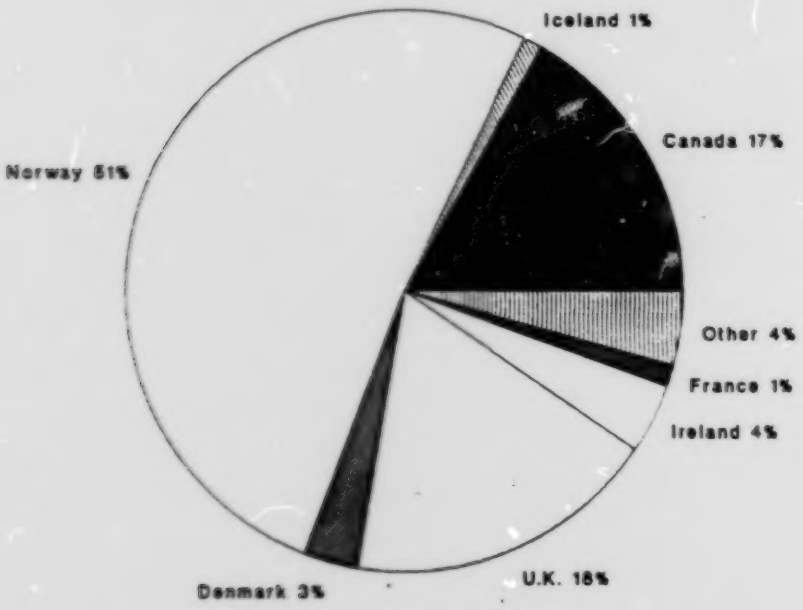
Exhibit 1.1 U.S. Imports of Smoked Salmon (1985 and 1989)

	Metric Tons			Nominal Value (US$1000s)			US$/lb		
	1985	1989	% Change	1985	1989	% Change	1985	1989	% Change
Canada	35.6	151.2	325%	$422.60	$2,190.60	418%	$5.39	$6.57	22%
Chile	0	2	NA	$0.00	$23.40	NA	NA	$5.31	NA
Iceland	6.4	8.5	48%	$76.00	$143.30	89%	$5.39	$6.84	27%
Norway	118.6	463.3	291%	$1,553.90	$6,883.40	343%	$5.94	$6.74	13%
Denmark	8.3	27.9	236%	$118.90	$390.00	228%	$6.50	$6.34	-2%
U.K.	114.8	163.9	43%	$2,045.50	$3,412.40	67%	$8.08	$9.45	17%
Ireland	17.1	36.1	111%	$265.00	$642.80	142%	$7.03	$8.08	15%
Netherlands	1.7	0.5	-71%	$24.70	$11.20	-55%	$6.59	$10.16	54%
France	8.9	11.1	25%	$119.20	$197.40	66%	$6.08	$8.07	33%
Other	11.2	36.4	225%	$193.50	$604.90	213%	$7.84	$7.54	-4%
Total	322.6	901.9	180%	$4,819.30	$14,499.20	201%	$6.78	$7.29	8%

Source: USDC (1990)

Exhibit 1.2

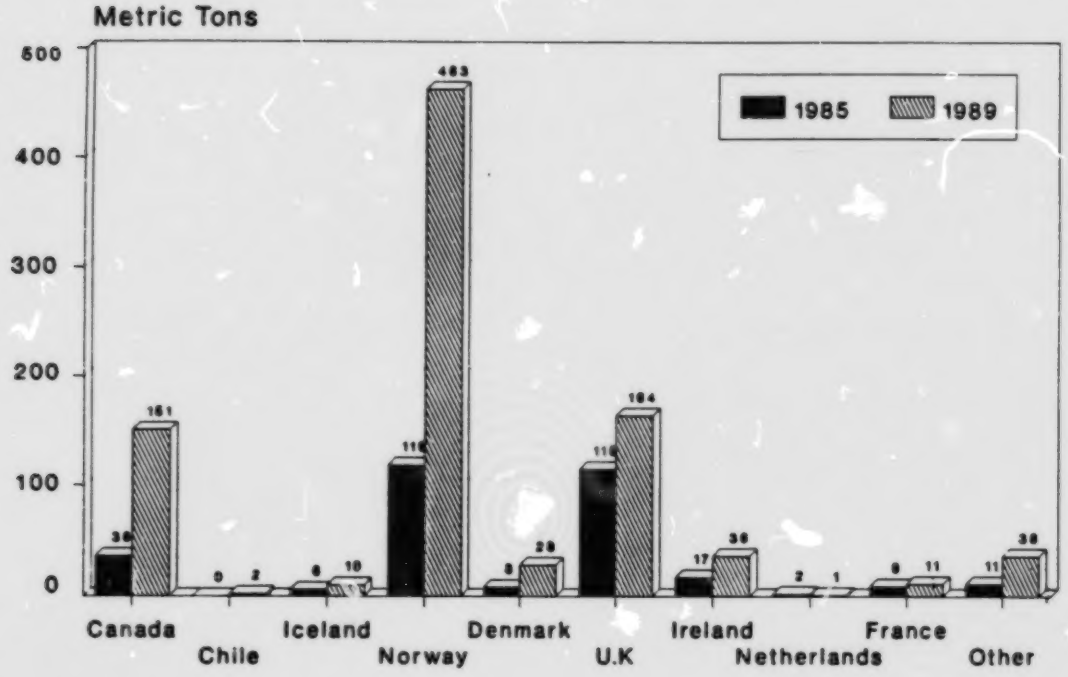
U.S. Imports of Smoked Salmon
By Country of Origin 1989



Source: USDC 1990.

Exhibit 1.3

U.S. Imports of Smoked Salmon
By Country of Origin (1985 and 1989)



Source: U.S. Dept. of Commerce 1990

In order to begin to address the lack of information available on this expanding market, a nationwide survey of retail seafood markets, gourmet stores and restaurants in the U.S. was conducted. This survey was designed to gather information on certain aspects of the U.S. market for smoked salmon such as:

- the current presence or availability of smoked salmon
- the type of smoked salmon products that are currently being utilized
- preferences for certain key smoked salmon attributes
- trends and seasonality in smoked salmon sales
- current information on prices and sales volumes.

1.2 SCOPE

A telephone survey of 691 firms in the U.S. was conducted in February and March 1990. The sample of firms focused on three market segments: seafood retail, gourmet stores and restaurants. The sample covered 13 metropolitan areas which comprise six regions: New England (Boston, Rhode Island, Hartford-New Haven), New York (New York City), the Mid-Atlantic (Philadelphia, Baltimore), the South (Miami, Dallas), Chicago, and the West (Denver, Los Angeles, San Francisco, Seattle).

A sample with a target size of 700 firms was randomly selected from the 1989 directories of seafood retail, gourmet stores and restaurants published by American Business Directories. In order to obtain subsamples of adequate size,

target percentages of 20 percent of the listed seafood retail firms, 20 percent of listed gourmet stores and 2 percent of listed restaurants in each of the 13 metropolitan were established. Based on these target percentages, firms were chosen for the sample using a random selection process. The resulting sample of 691 firms consisted of 155 seafood retail firms (16.7 percent of a total 928 firms listed), 102 gourmet stores (29.2 percent of a total 349 firms listed), and 434 restaurants (1.7 percent of a total 25,529 firms listed).

Overall, 415 firms responded to the telephone survey or 60 percent of the 691 firms in the sample (Exhibit 1.4). The response rates of market segments were 56 percent of seafood retailers, 44 percent of gourmet stores and 65 percent of restaurants. Response rates for the regions ranged from 52 percent to 70 percent.

While reading this document, readers should remember that many of the following results are based on a very limited sample. Therefore, highly disaggregated results may be misleading and should be viewed with caution.

Exhibit 1.4: Telephone Survey Sample and Responses

Market Segment Response	Sample Size	Survey Response: Firms Responding	%
Seafood retail	155	87	56%
Gourmet stores	102	45	44%
Restaurants	434	283	65%
	691	415	60%
Region			
New England	97	68	70%
New York	109	64	59%
Mid-Atlantic	88	52	59%
South	99	51	52%
Chicago	101	56	55%
West	197	124	63%

CHAPTER 2

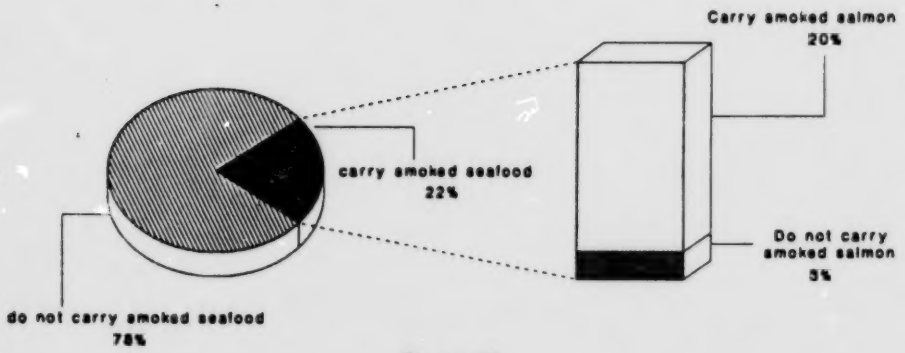
MARKET PRESENCE OF SMOKED SALMON

2.1 OVERALL

In the overall sample of 415 respondents, 78 percent of the firms did not carry smoked seafood of any kind (Exhibit 2.1), while 22 percent carried some sort of smoked seafood. In the overall sample of respondents, only 20 percent carried smoked salmon. Firms carrying smoked seafood averaged 2.9 different species of smoked seafood and 1.8 smoked salmon products per firm (Exhibit 2.3).

Exhibit 2.1:

Market Presence of Smoked Salmon



Overall

N = 415

2.2 MARKET SEGMENTS

2.2.1 Market Presence of Smoked Seafood and Smoked Salmon

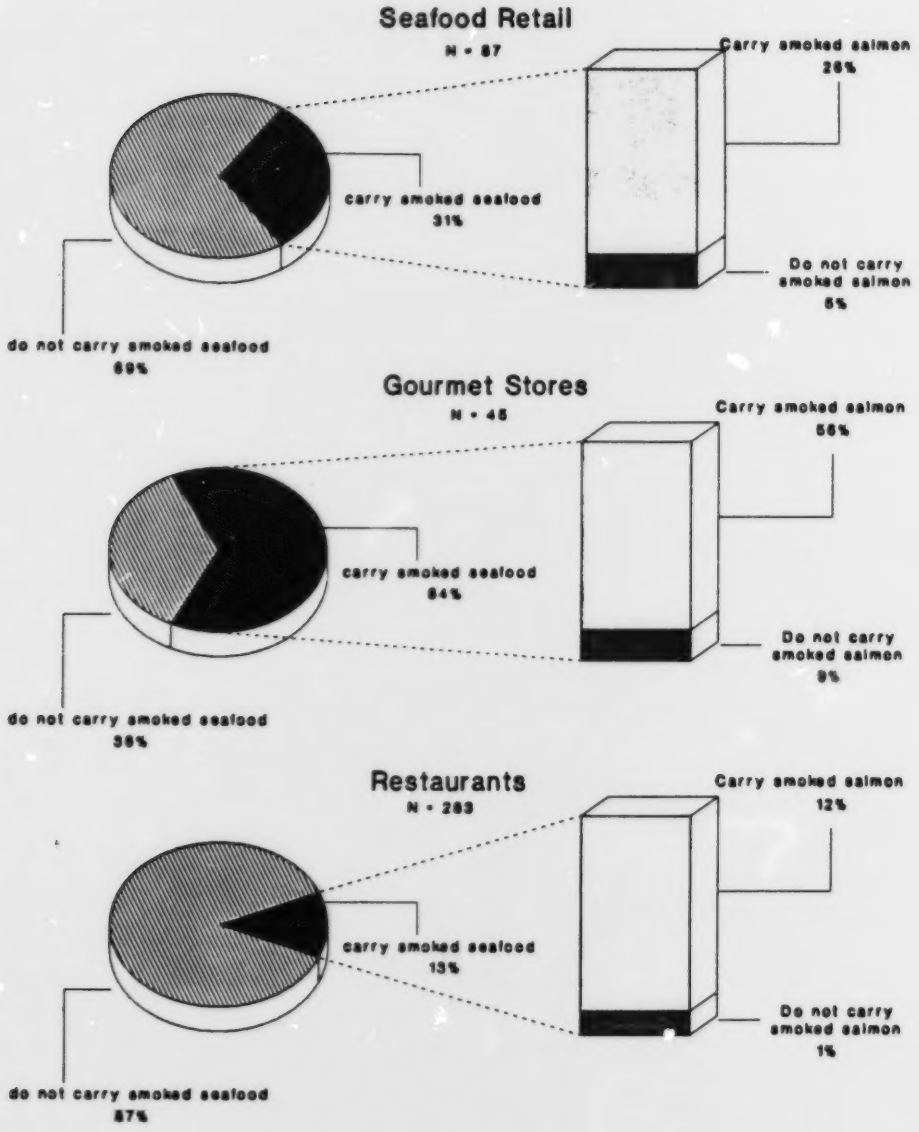
Smoked salmon and other smoked seafood was most prevalent among gourmet stores where a total of 64 percent of the respondents carried smoked seafood and 56 percent carried smoked salmon. Seafood retailers ranked second in prevalence of smoked seafood and smoked salmon with approximately 31 percent of the respondents carrying smoked seafood and 26 percent carrying smoked salmon. Restaurants were the least likely to carry smoked seafood or smoked salmon, with only 13 percent carrying smoked seafood and 12 percent carrying smoked salmon (Exhibit 2.2).

The reasons for not carrying smoked seafood varied among the market segments. Among gourmet stores, the primary reason for not carrying smoked salmon or any smoked seafood was that there was no perceived demand, given by 67 percent of the responding firms. No other reason for not carrying smoked salmon was cited more than once.

For seafood retailers, 74 percent of those indicating a reason for not carrying smoked seafood stated that there was no demand. In the northeast U.S., several seafood retailers did not carry smoked seafood because they specialized in fresh fish or shellfish (particularly lobster or clams) and did not carry any other seafood.

Exhibit 2.2.

Market Presence of Smoked Salmon By Market Segment



This group accounted for 21 percent of seafood retailers not carrying smoked seafood. A small group, 5 percent, indicated that smoked seafood was too hard to handle or store.

Of the responding restaurants, 93 percent said that their reason for not carrying smoked seafood was because it did not fit the restaurant's cuisine, 3 percent perceived no demand, and 4 percent cited other reasons. Of the restaurants that did not carry smoked seafood, 49 percent specialized in ethnic cuisine such as Italian, Mexican or Chinese, 15 percent were fast food restaurants, 14 percent were family-style restaurants, 9 percent were delicatessens/take-out, 8 percent were cafes/coffee shops, and 6 percent were "while tablecloth" restaurants.

Of restaurants that carried smoked seafood, two-thirds indicated their restaurant type: 52 percent were "white tablecloth" restaurants, 12 percent were sushi bars or Japanese restaurants offering sushi, 9 percent specialized in other types of ethnic cuisine, 6 percent were delicatessens/take-out restaurants, and 9 percent were cafes/coffee shops.

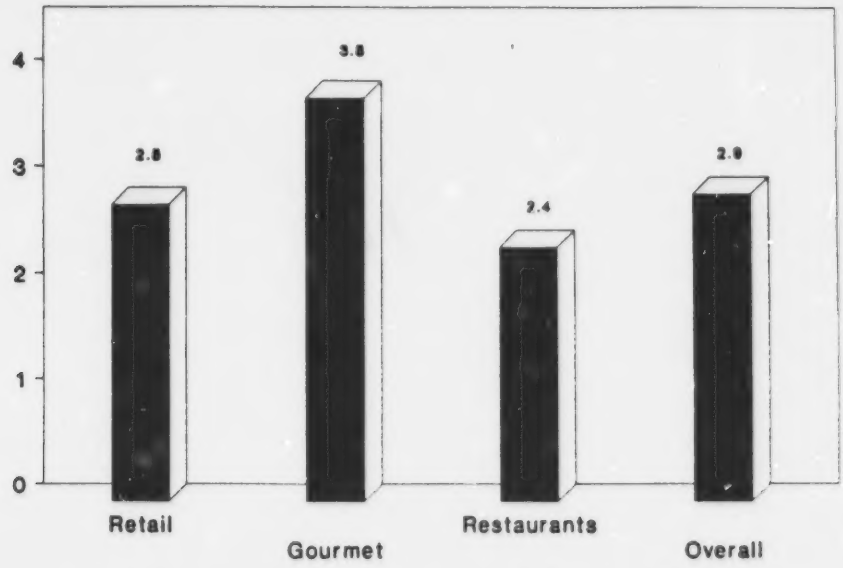
2.2.2 Average Number of Species of Smoked Seafood and Smoked Salmon Products Carried

Gourmet stores carried the largest variety of smoked seafood, with an average of 3.8 different species of smoked seafood per firm and 2.1 smoked salmon products (Exhibit 2.3). Note that in this analysis, a smoked salmon product is a unique combination of species, preparation and product form. For example, although species, preparation and brand may be the same, product form may differ, i.e. side versus portion, pre-sliced versus uncut, therefore, more than one product has been designated.

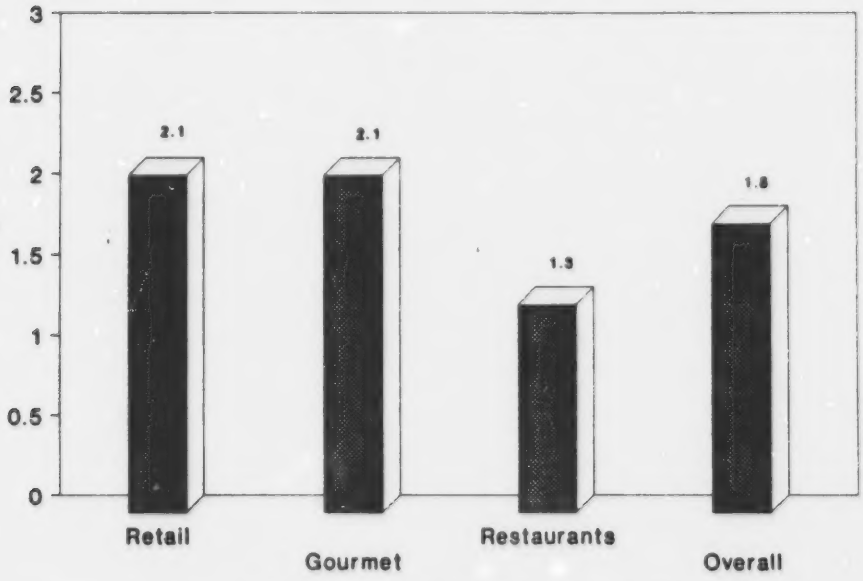
The seafood retail segment ranked second in the average number of species of smoked seafood, with an average of 2.8 species of smoked seafood and 2.1 smoked salmon products per firm. Restaurants had the least variety of smoked seafood and smoked salmon products with an average of 2.4 species of smoked seafood and 1.3 smoked salmon products per firm (Exhibit 2.3).

Exhibit 2.3

Average No. of Species of Smoked Seafood and Average No. of Smoked Salmon Products Per Firm, By Market Segment



Average Number of Species of Smoked Seafood



Average Number of Smoked Salmon Products

2.3 REGIONS

2.3.1 Market Presence of Smoked Seafood and Smoked Salmon

Exhibit 2.4 shows the market presence of smoked salmon in the six regions covered by the survey sample. In general, of the respondents who carried smoked salmon, most carried smoked salmon as well as other smoked seafood, rather than smoked salmon exclusively. The New England region had the greatest prevalence of smoked salmon with 29 percent of the respondents carrying smoked salmon exclusively or with other smoked seafood. The New York City region was second with 23 percent of respondents carrying smoked salmon, followed by the West region with 22 percent carrying smoked salmon. The Chicago region had the largest percentage of respondents who did not carry any smoked seafood (86 percent), and only 14 percent of responding firms there carried smoked salmon. The Mid-Atlantic region had the smallest percentage of respondents who carried smoked salmon (10 percent). Few firms in the South carried smoked salmon or any smoked seafood; 82 percent of the responding firms in this region did not carry any smoked seafood and only 16 percent carried smoked salmon.

Exhibit 2.4

Market Presence of Smoked Salmon By Region

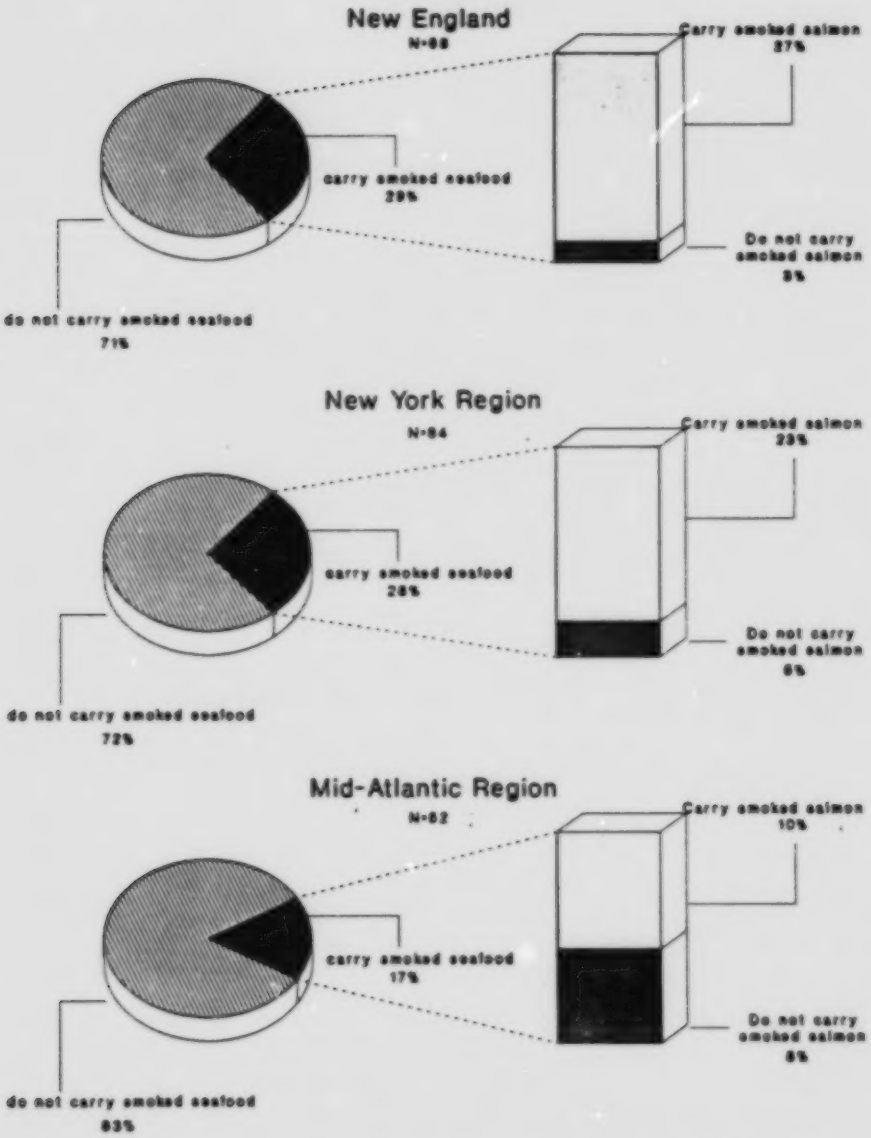
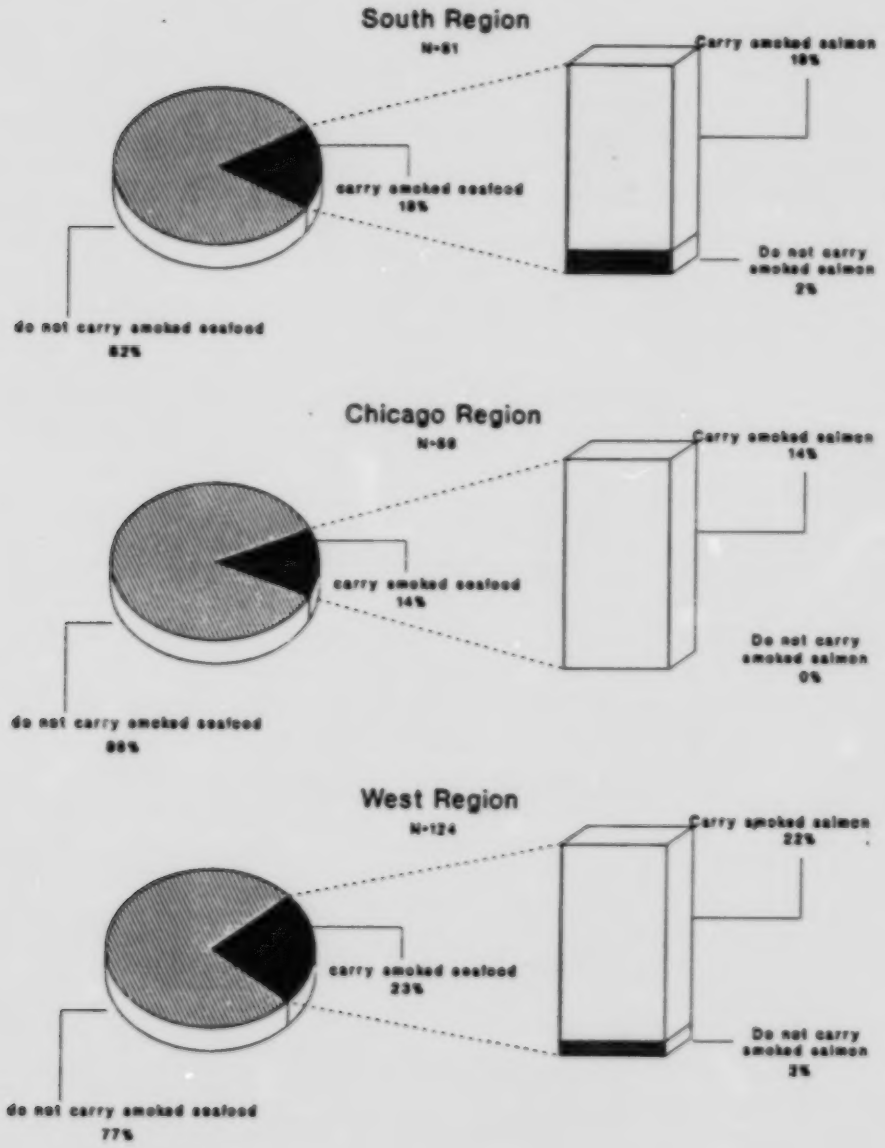


Exhibit 2.4 (Cont.)

Market Presence of Smoked Salmon By Region (Cont.)

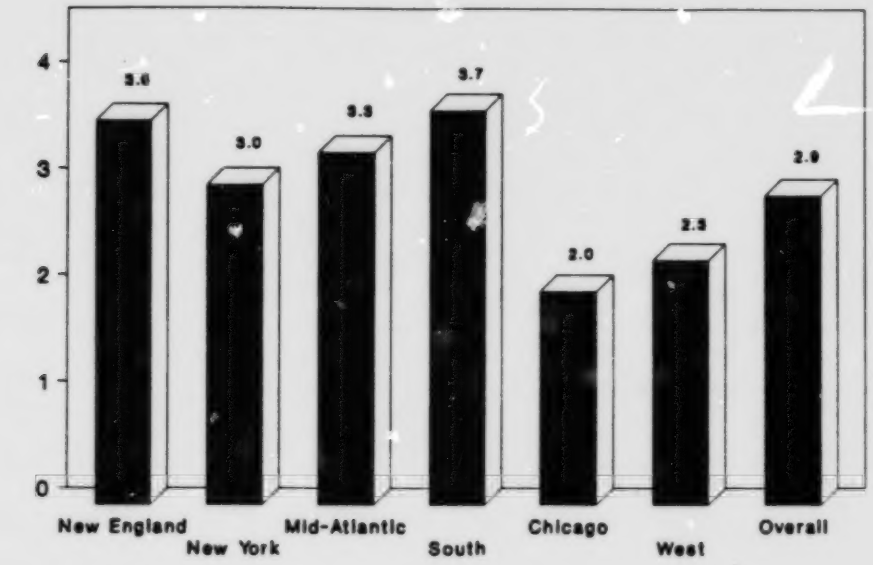


2.3.2. Average Number of Species of Smoked Seafood and Smoked Salmon Products Carried

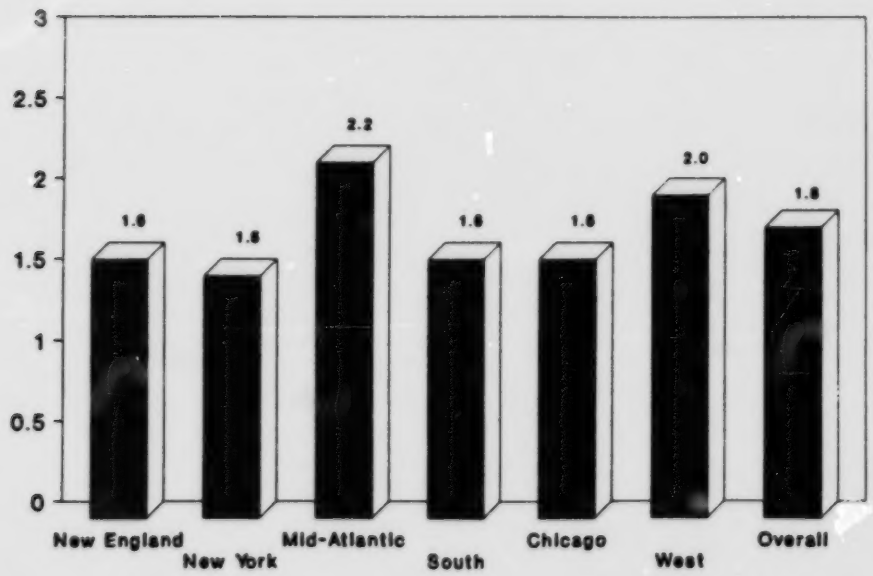
As shown in Exhibit 2.5, there are significant differences among the regions in terms of average number of smoked seafood products carried per firm. New England and the South carry the greatest variety of smoked seafood with an average of 3.6 and 3.7 different species of smoked seafood per firm, respectively. Meanwhile, the West and Mid-Atlantic regions carry the largest average number of smoked salmon products per firm of 2.0 and 2.2, respectively. Chicago and the West had the least variety of smoked seafood products with an average of 2.0 and 2.3 different species of smoked seafood, respectively. Note that due to small sample sizes, statistics for the Mid-Atlantic, South and Chicago regions should be viewed with appropriate caution.

Exhibit 2.5

Average No. of Species of Smoked Seafood and Average No. of Smoked Salmon Products Per Firm, By Region



Average Number of Species of Smoked Seafood



Average No. of Smoked Salmon Products

CHAPTER 3

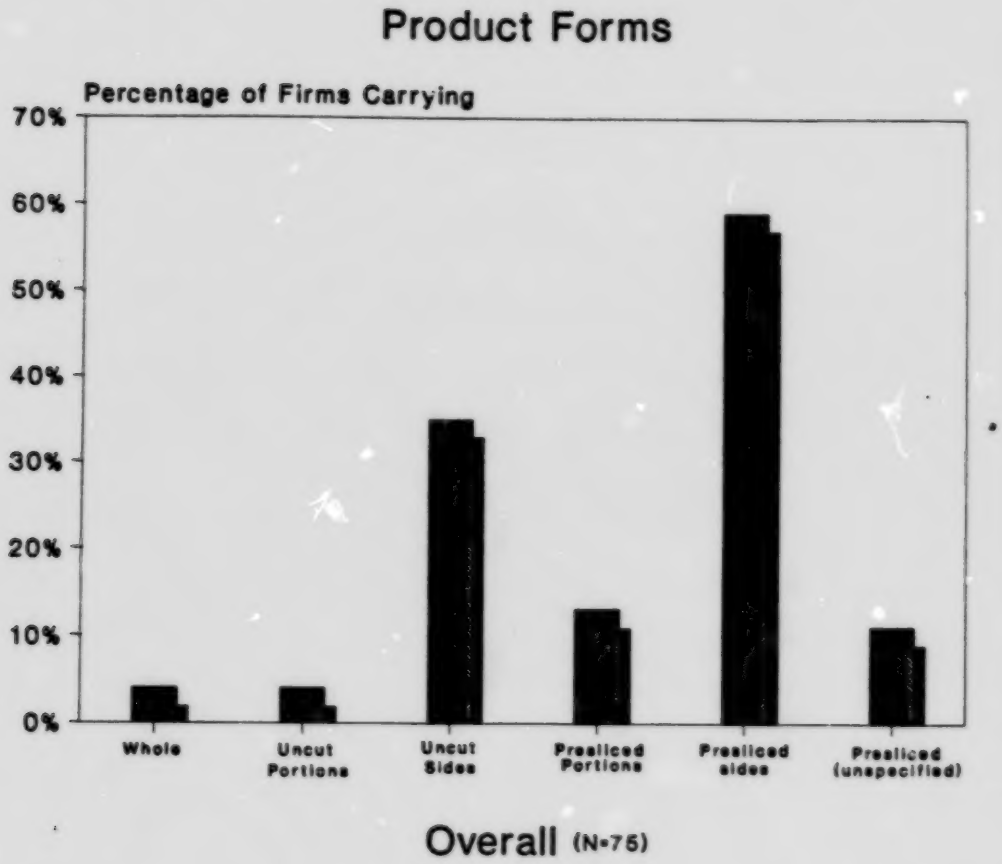
CURRENT SMOKED SALMON PRODUCTS

3.1 PRODUCT FORMS

3.1.1 Overall

Exhibit 3.1 shows the proportions of various product forms handled by firms which carry smoked salmon and indicates an overwhelming preference for sides over portions. Pre-sliced sides were the dominant product form with 59 percent of the firms carrying this product form as at least one of their smoked salmon products. In fact, 39 percent of the responding firms carried pre-sliced sides as their only product form of smoked salmon (Appendix A). The second most prevalent product form were uncut sides which were carried by 35 percent of firms. Sides of smoked salmon, whether pre-sliced or uncut, were carried as the only product forms of smoked salmon by 71 percent of the responding firms. In the total sample of responding firms, only 4 percent carried an uncut portioned product and 13 percent carried a pre-sliced portioned product. Three firms (4 percent) carried portioned products exclusively. Furthermore, no firms carried smoked salmon pate.

Exhibit 3.1


Product Forms
Percentage of Firms Carrying
70%
60%
50%
40%
30%
20%
10%
0%
Whole
Uncut Portions
Uncut Sides
Presliced Portions
Presliced sides
Presliced (unspecified)
Overall (N=75)

3.1.2 Market Segments

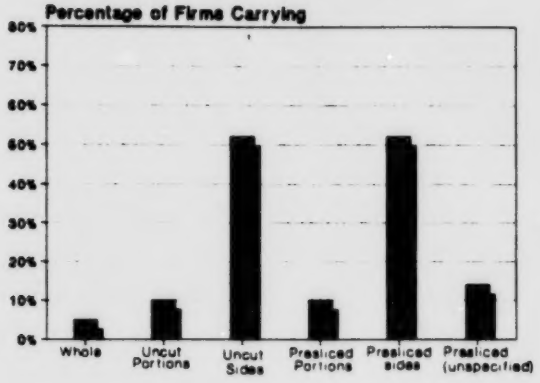
In general the product attributes of sides or pre-sliced are the most prevalent product form characteristics among the three market segments, while portioned products are much less common.

Pre-sliced sides are clearly the dominant product form among gourmet stores and restaurants, where 61 percent of the firms carry it as at least one of their smoked salmon products. In the seafood retail segment, uncut sides are as prevalent as pre-sliced sides, each being carried by 52 percent of the firms as at least one of their smoked salmon products (Exhibit 3.2). Although a smaller proportion of firms in the retail seafood segment utilize pre-sliced sides compared to other segments, a significantly larger percentage of seafood retail firms (52 percent) carry uncut sides than either gourmet stores (30 percent) or restaurants (26 percent).

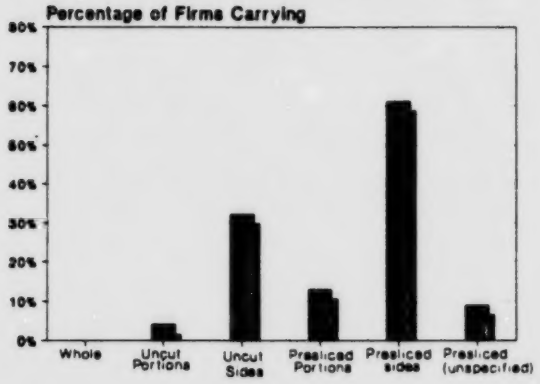
Exhibit. 3.2

Product Form by Market Segment

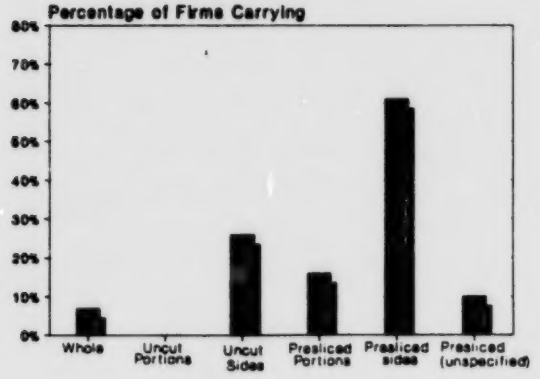
Seafood Retail (N=21)



Gourmet Stores (N=23)



Restaurants (N=31)



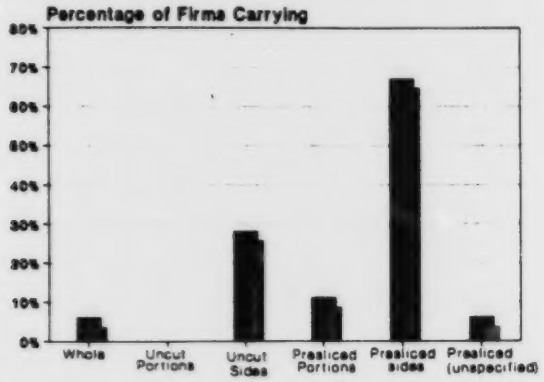
3.1.3 Regions

As with the market segments, sides and pre-slicing were dominant characteristics of smoked salmon products among all the regions while portioned products were less prevalent. With the exception of the New York City and the Chicago regions, a pre-sliced side was the product form carried by the largest percentage of firms responding (Exhibit 3.3). In the New York and Chicago regions uncut sides were the product form carried by the largest percentage of firms with 57 percent of Chicago firms and 54 percent of New York City firms carrying it.

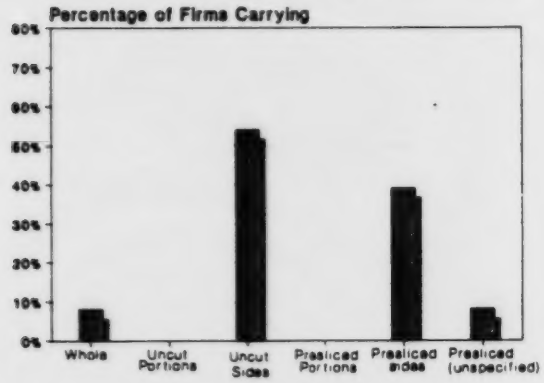
Exhibit 3.3

Product Form by Region

New England (N=18)



New York City (N=13)



Mid Atlantic (N=5)

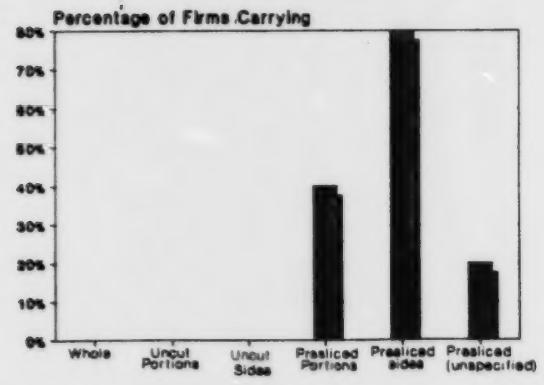
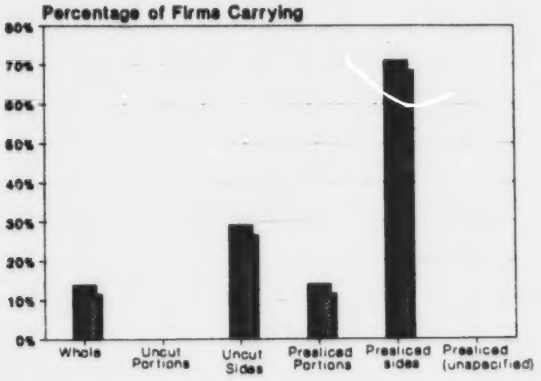


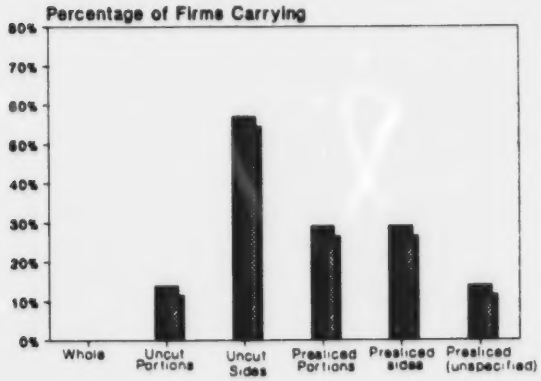
Exhibit 3.3 (Cont.)

Product Form by Region (Cont.)

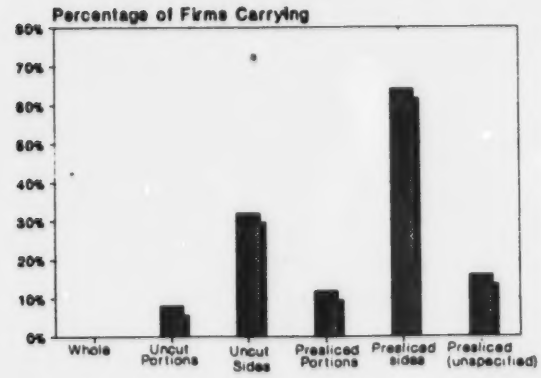
South (N=7)



Chicago (N=7)



West (N=25)



3.2 STYLE OR TYPE OF PREPARATION

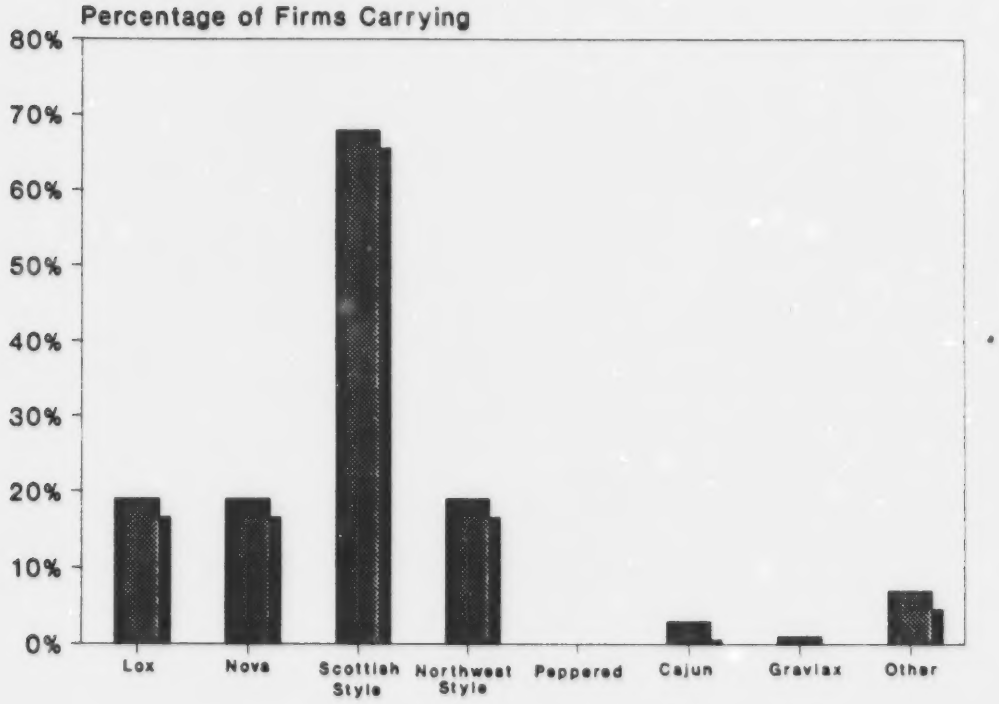
3.2.1 Overall

Clearly, the traditional cold-smoked style typical of European and Scandinavian producers, and for the purposes of this survey, labeled "Scottish style," is the type of smoked salmon most prevalent in the U.S. marketplace today (Appendix A and Exhibit 3.4). In fact, 68 percent of the responding firms carried a Scottish style smoked salmon as at least one of their smoked salmon products. Far behind Scottish style was Northwest style (hot-smoked) smoked salmon with 19 percent of firms carrying this type of preparation, lox, carried by 19 percent, and nova, also carried by 19 percent of the responding firms. It is interesting to note that 51 percent of the responding firms carried a Scottish style smoked salmon as their only type of smoked salmon, compared to 9 percent of the firms that carried lox as their only smoked salmon, 7 percent that carried Northwest style exclusively and 7 percent that carried nova as their only smoked salmon. No firm carried peppered style smoked salmon.

Although lox is not smoked, it was included in this survey because of its widespread presence as a value-added salmon product and its close association with smoked salmon products.

Exhibit 3.4

Product Style/Type of Preparation



Overall (N=75)

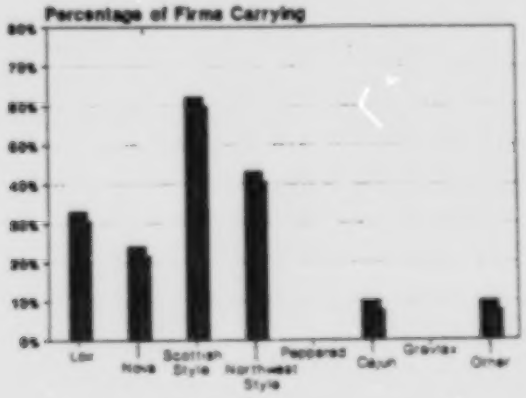
3.2.2 Market Segments

Scottish style is the most prevalent preparation of smoked salmon in all three market segments while other types of smoked salmon are significantly less common (Exhibit 3.5). In addition, Scottish style smoked salmon was the only type of smoked salmon carried by 60 percent of the responding restaurants, 50 percent of the gourmet stores and 38 percent of the retail seafood firms. Although few of the responding firms in the gourmet store and restaurant segments carried Northwest style smoked salmon, 43 percent of the responding retail seafood firms did carry this style, and 10 percent of the firms carried a Northwest style smoked salmon as their only smoked salmon product (Appendix A). Although significantly less prevalent than Scottish style smoked salmon, lox and nova appear to have a firm position in the market place, while other preparations such as gravlax and cajun style were rarely mentioned.

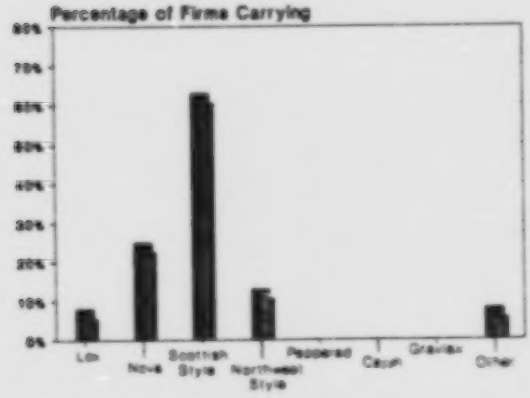
Exhibit 3.5

Product Style/Type by Market Segment

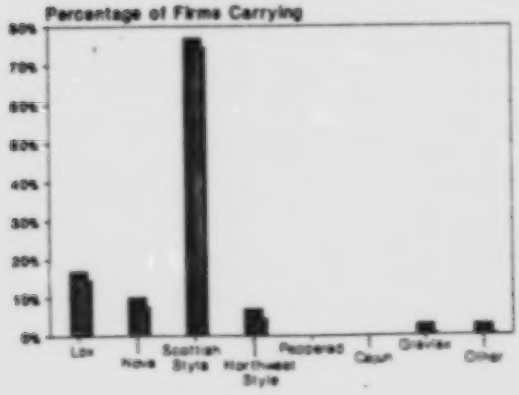
Seafood Retail (N=21)



Gourmet Stores (N=24)



Restaurants (N=30)-



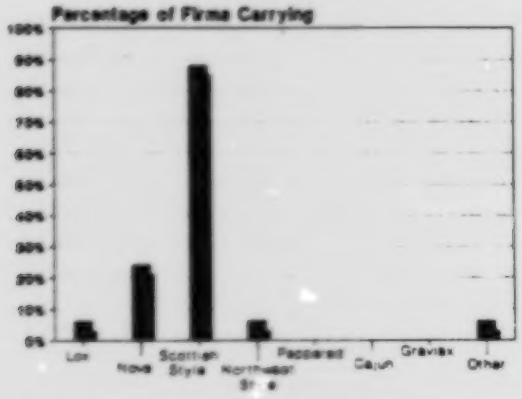
3.2.3 Regions

As in the market segments, Scottish style smoked salmon is the most prevalent type of smoked salmon across all six regions, except Mid-Atlantic, where it is as prevalent as Lox and Nova (note, however, the small sample size of this region in Appendix B). There are also some significant variations in the types of preparation of smoked salmon carried among the regions (Exhibit 3.6). Generally speaking, as one tends toward the Pacific coast, a greater proportion of firms carry Northwest-style smoked salmon while as one tends toward the Atlantic coast, Scottish-style smoked salmon is carried by a larger percentage of firms. For example, 88 percent of the responding firms in New England carried a Scottish style smoked salmon as at least one of their smoked salmon products, while only 6 percent reported carrying a Northwest style smoked salmon. In the West, on the other hand, 44 percent carried Scottish style while 40 percent carried Northwest style as at least one of their smoked salmon products. Lox and nova are found in varying proportions among firms in the six regions, and, particularly in the case of nova, appear to have a consistent presence across the country. Note that statistics for the Mid-Atlantic, Chicago and South regions should be viewed with extreme caution as the number of responses in these regions are perhaps too few to be reliable.

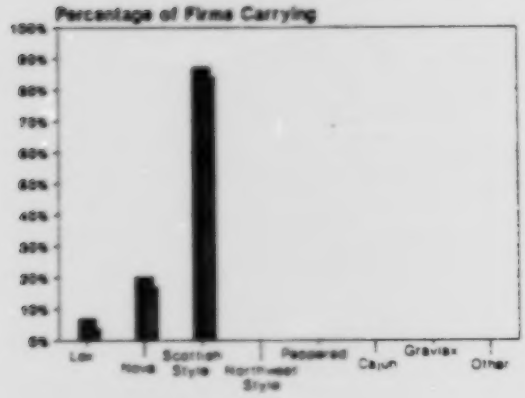
Exhibit 3.6

Product Style/Type by Region

New England (N=17)



New York City (N=15)



Mid Atlantic (N=4)

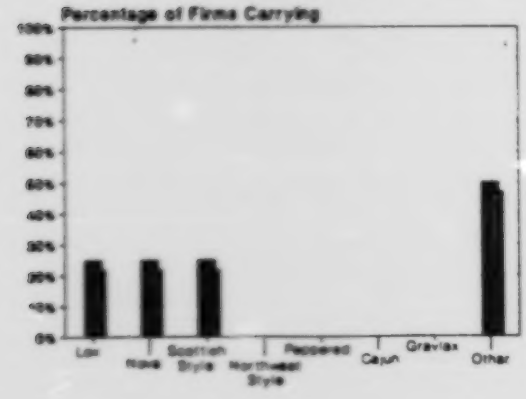
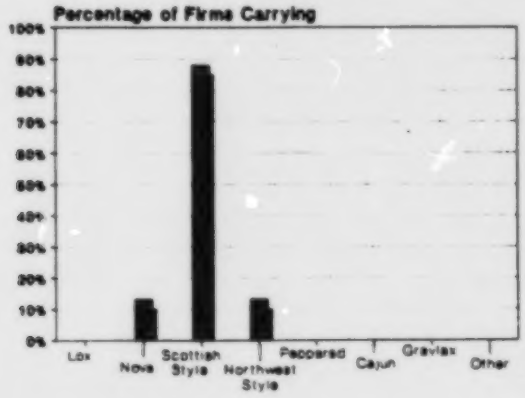


Exhibit 3.6 (Cont.)

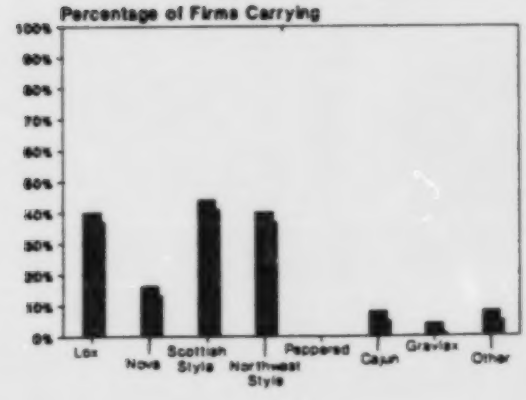
Product Style/Type by Region (Cont.)

South (N=8)



Chicago (N=6)

West (N=25)

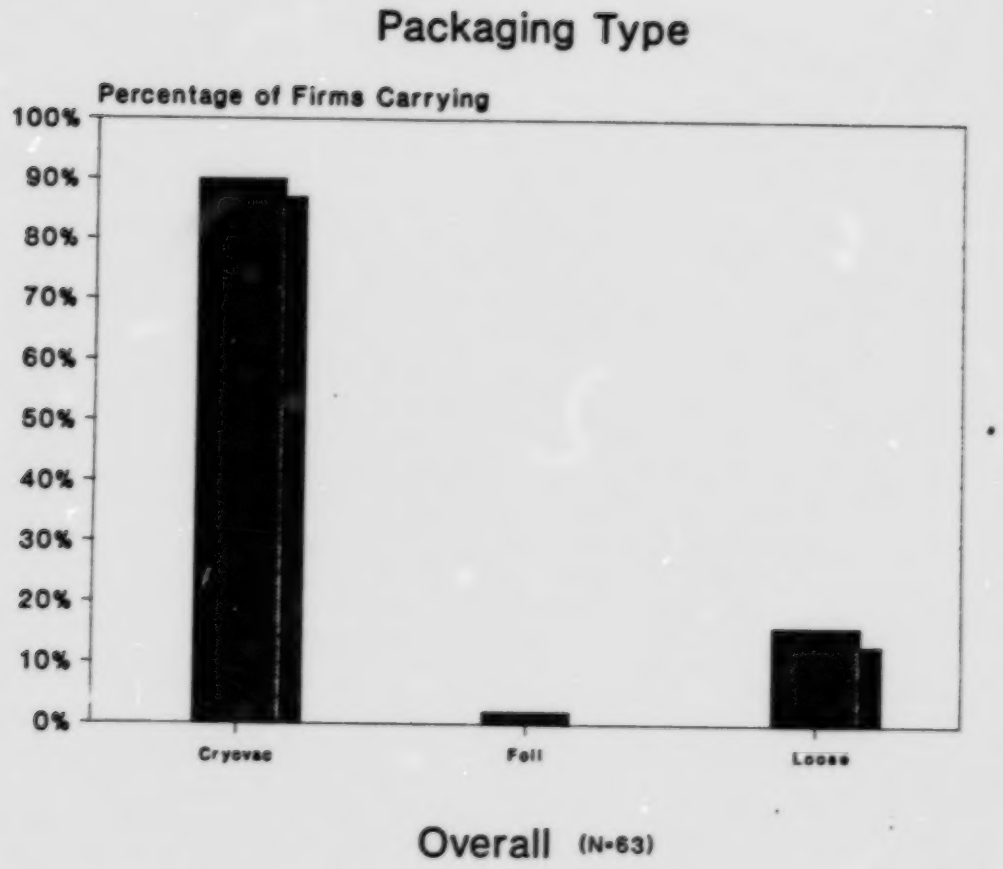


3.3 PACKAGE TYPE

3.3.1 Overall

As Exhibit 3.7 clearly shows, the cryovac or vacuum pack is essentially the industry standard for packaging. Of the firms responding, 90 percent carried a smoked salmon product packed in a cryovac vacuum pack, while 16 percent carried smoked salmon in a loose or bulk form. Only one firm mentioned carrying a smoked salmon product wrapped in a foil pouch. Note also that 84 percent of the firms carried a cryovac packaged salmon as their only package type.

Exhibit 3.7


Packaging Type
Percentage of Firms Carrying
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Cryovac
Foil
Loose
Overall (N=63)

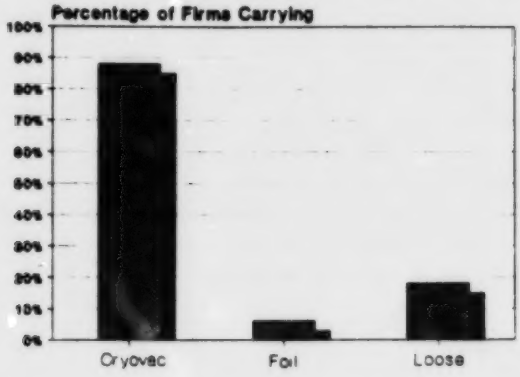
3.3.2 Market Segments

Among all three segments surveyed, 88 percent or more of the firms responding carried vacuum packed products (Exhibit 3.8). Cryovac was the only type of packaging used by 88 percent of the responding restaurants, 82 percent of the gourmet stores and 82 percent of the retail seafood firms. Loose or bulk packaging was most prevalent in the retail seafood segment where 18 percent of the respondents used this type of packaging in at least one of their smoked salmon products. Only one retail seafood firm carried a foil packed product.

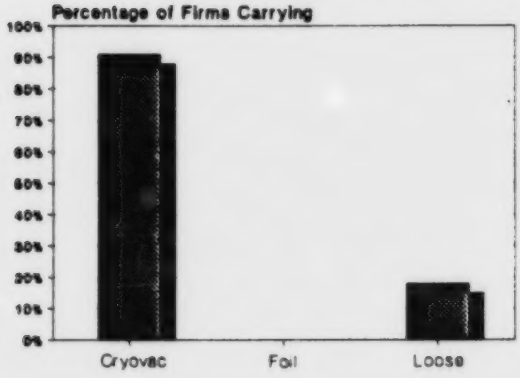
Exhibit 3.8

Package Type by Market Segment

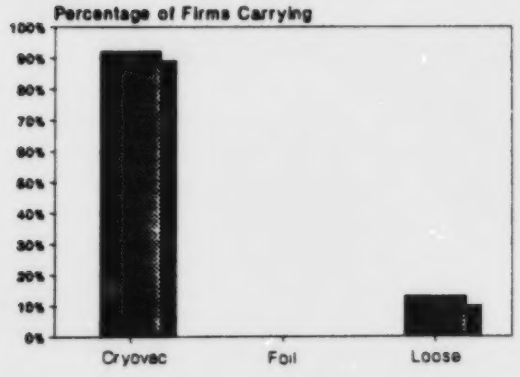
Seafood Retail (N=17)



Gourmet Stores (N=22)



Restaurants (N=24)



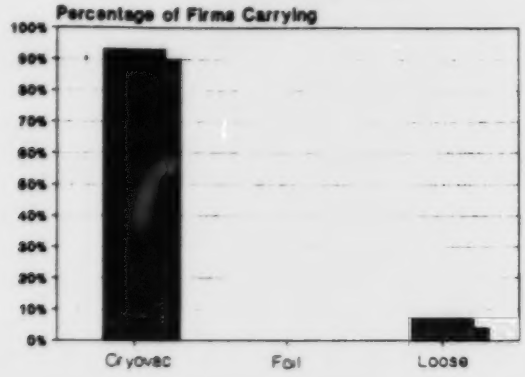
3.3.3 Regions

Exhibit 3.9 shows the breakdown of package types by regions. As with the market segments, the vacuum pack is the most common form of packaging of smoked salmon with 80 percent or more of the firms in each region carrying a vacuum-packed smoked salmon as at least one of their smoked salmon products. In addition, 60 percent or more of the firms in each region carried a vacuum pack as their only package type of smoked salmon (Appendix B). Foil or loose packaging ranged from being present among none of the firms in the Chicago region to being present among 33 percent of the firms in the New York City region. Foil pouch packaging was reported by one firm in the West region.

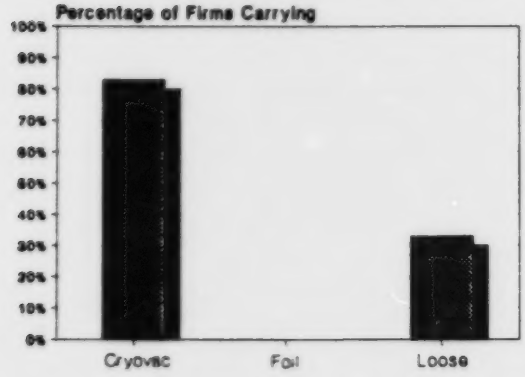
Exhibit 3.9

Package Type by Region

New England (N=15)



New York City (N=12)



Mid Atlantic (N=5)

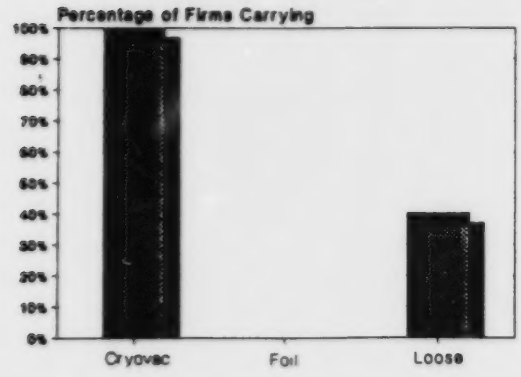
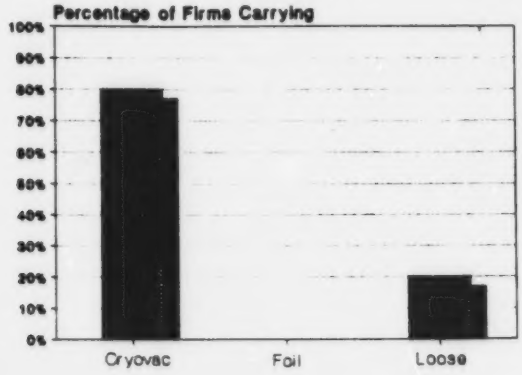


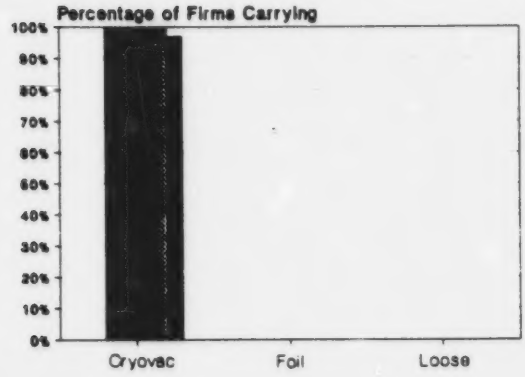
Exhibit 3.9 (Cont.)

Package Type by Region (Cont.)

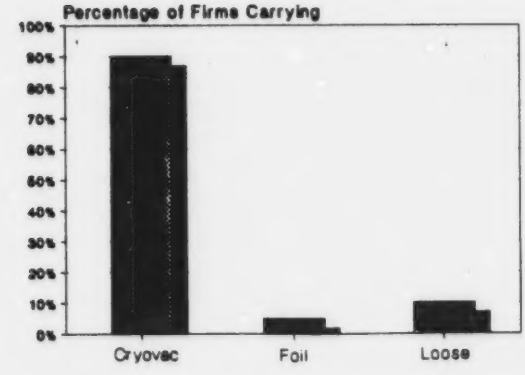
South (N=5)



Chicago (N=5)



West (N=21)

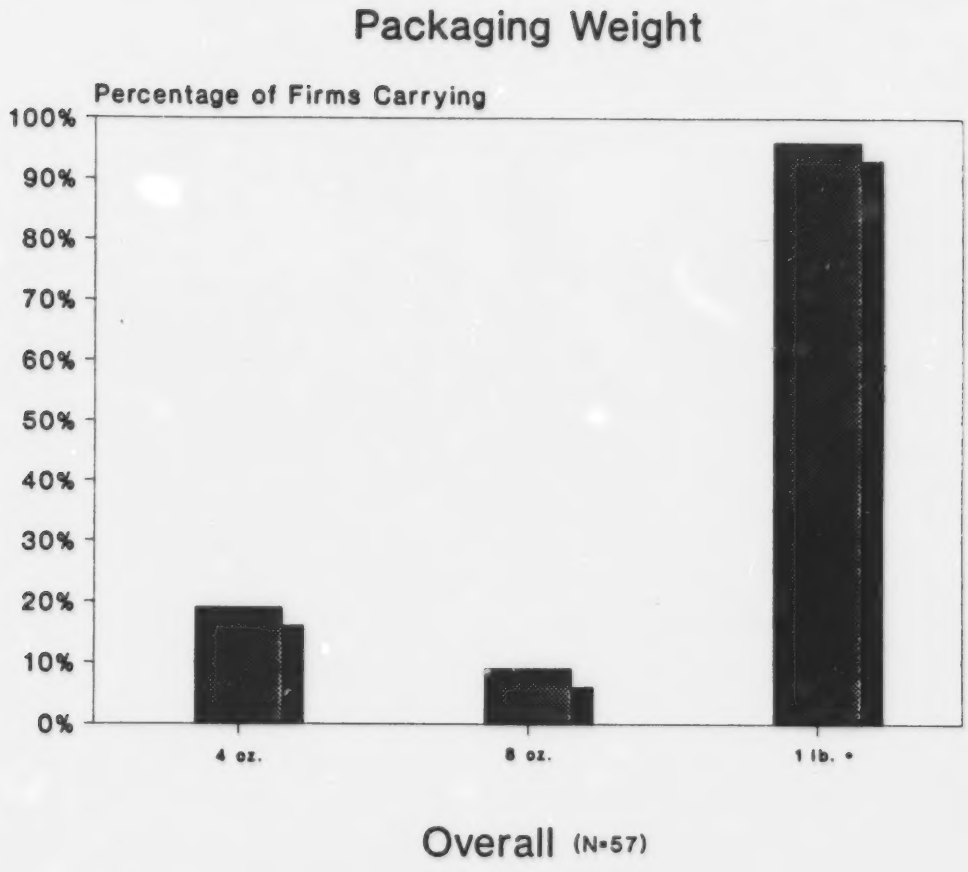


3.4 PACKAGE WEIGHT

3.4.1 Overall

The package weights carried by firms match closely the product form patterns. Of product forms, sides rather than portions of smoked salmon are carried by the largest percentage of firms, and consequently package weights one pound or greater are the most prevalent category of package weight (Exhibit 3.10). Overall, 96 percent of the responding firms carried products weighing one pound or more as at least one of their smoked salmon products. Furthermore, for 77 percent of the firms, the one pound and greater package weight was the only size of smoked salmon they carried. Only 11 percent and 2 percent of the firms, respectively, reported carrying the smaller four and eight ounce packages of smoked salmon.

Exhibit 3.10


Packaging Weight
Percentage of Firms Carrying
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
4 oz.
8 oz.
1 lb. +
Overall (N=57)

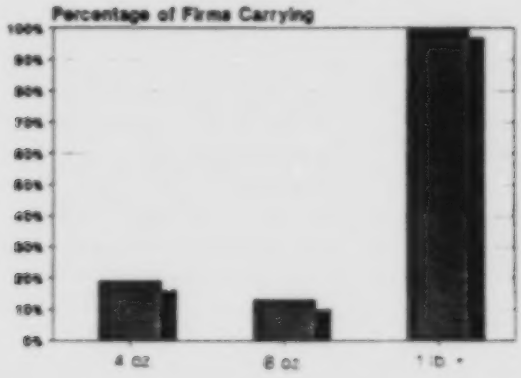
3.4.2 Market Segments

Among the three market segments surveyed, just as sides of smoked salmon were the most common product form, the most common category of package weight is one pound or greater carried by 95 percent or more of the responding firms in each market segment (Exhibit 3.11). Of the lower package weights, a greater percentage of the firms responding in each market segment carried quarter pound packages than half pound packages. It is also interesting to note that 73 percent or more of the responding firms in each segment carried the one pound or greater products as their only package weight of smoked salmon.

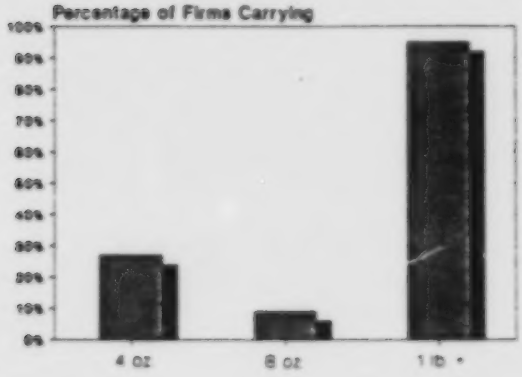
Exhibit 3.11

Package Weight by Market Segment

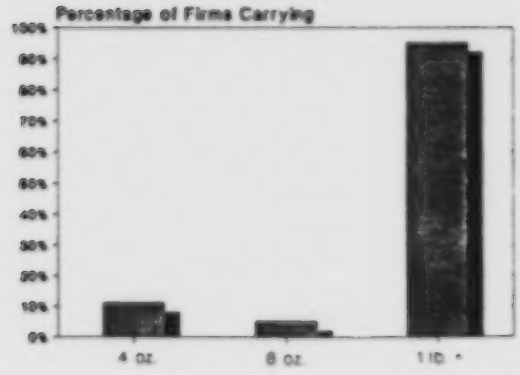
Seafood Retail (n=16)



Gourmet Stores (n=22)



Restaurants (n=19)



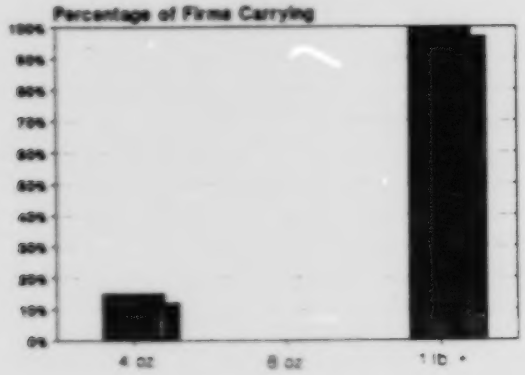
3.4.3 Regions

Once again, the category of one pound or greater is the dominant package weight among all regions. This is particularly true of the New York City region where no respondents reported carrying the four and eight ounce packages. Note that results, especially for the Mid-Atlantic, Chicago and South regions are uncertain due to the small number of responses to this question (Appendix B).

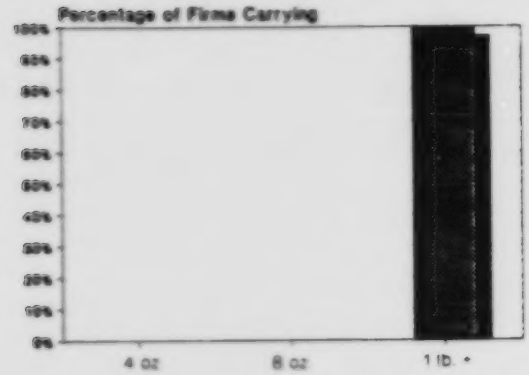
Exhibit 3.12

Package Weight by Region

New England (n=13)



New York City (N=12)



Mid Atlantic (N=5)

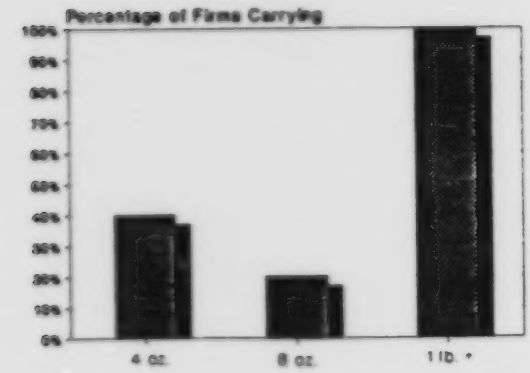
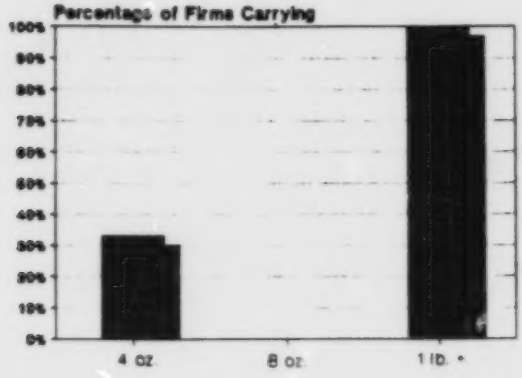


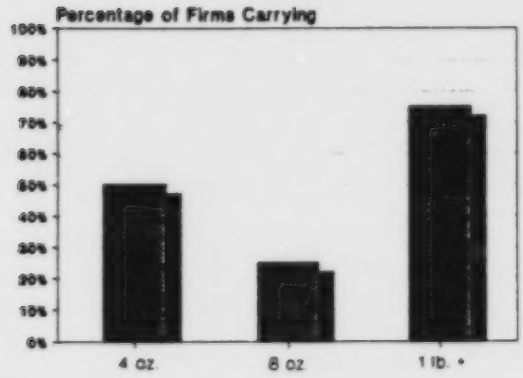
Exhibit 3.12 (Cont.)

Package Weight by Region (Cont.)

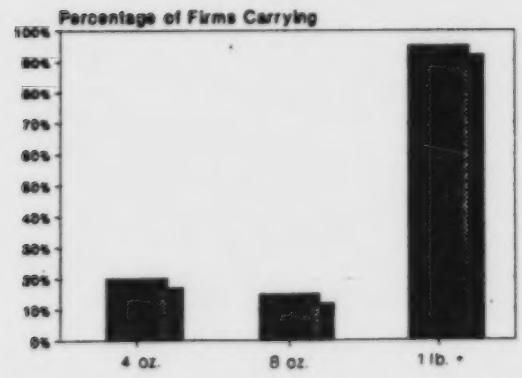
South (N=3)



Chicago (N=4)



West (N=20)



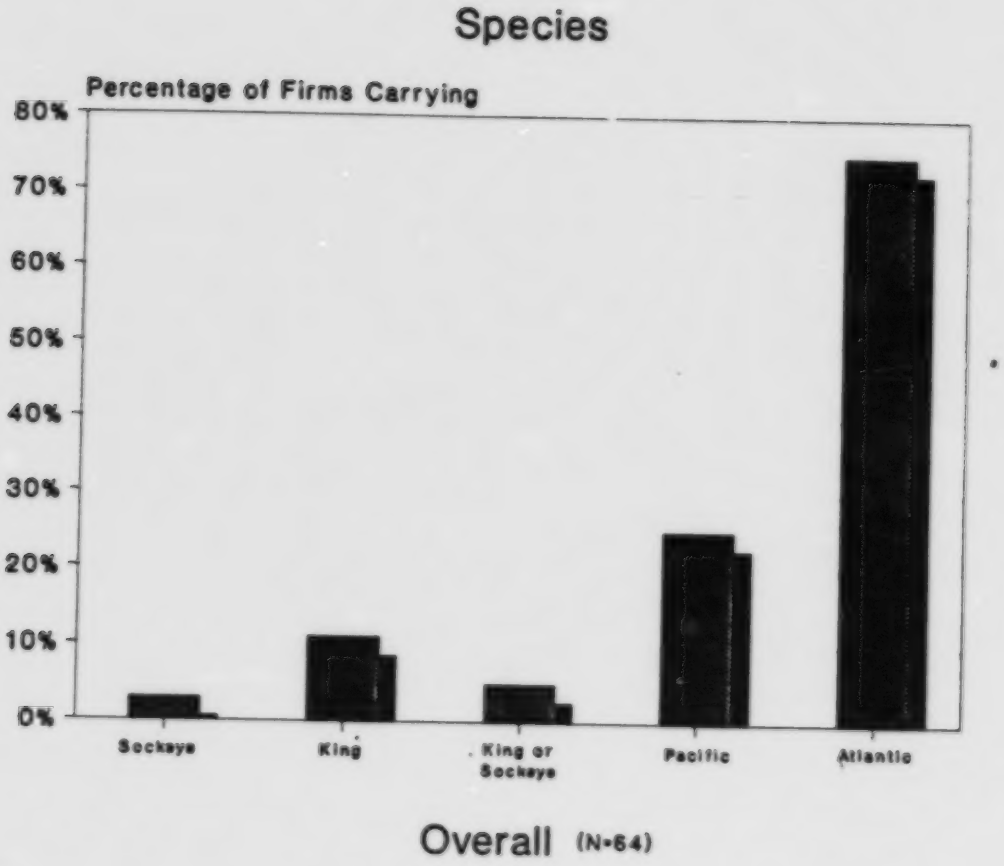
3.5 SPECIES

3.5.1 Overall

Among all the firms who responded, smoked salmon produced from Atlantic salmon was carried by the largest percentage of firms (Exhibit 3.13). Of the total number of firms who identified the species of smoked salmon they carried, 75 percent carried a smoked Atlantic salmon, 25 percent carried a smoked Pacific salmon but did not specify the species, 11 percent carried a smoked king salmon, 5 percent carried a smoked king or sockeye salmon, and 3 percent said they carried a smoked sockeye salmon. Note that percentages do not add up to 100 since many firms carried more than one species of smoked salmon. Overall, 61 percent of the responding firms carried smoked Atlantic salmon as their only smoked salmon product, 25 percent carried smoked Pacific salmon only and 14 percent carried both Atlantic and Pacific smoked salmon.

The apparent dominance of Atlantic salmon in the smoked market may actually be in part due to the fact that many respondents assume that cold smoked products are Atlantic salmon whether or not they are actually made from Atlantic salmon.

Exhibit 3.13


Species
Percentage of Firms Carrying
80%
70%
60%
50%
40%
30%
20%
10%
0%
Sockeye
King
King or Sockeye
Pacific
Atlantic
Overall (N=64)

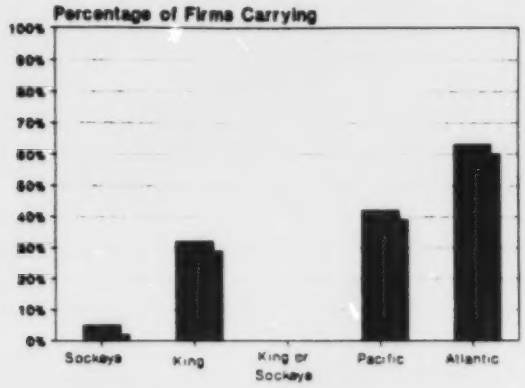
3.5.2 Market Segments

Although smoked Atlantic salmon is more prevalent than smoked Pacific salmon in each of the market segments surveyed, this trend is more pronounced in the restaurant and gourmet sectors than the retail seafood sector. Smoked Atlantic salmon is carried by 83 percent of the responding gourmet stores, 77 percent of the restaurants and 63 percent of the retail seafood stores (Exhibit 3.14). In fact, 73 percent of the responding restaurants, 70 percent of the responding gourmet shops and 37 percent of the responding retail seafood firms carry Atlantic salmon as their only species of smoked salmon. Pacific species of smoked salmon are more prevalent in the retail seafood segment where 42 percent of the responding firms carry an unspecified species of smoked Pacific salmon, 32 percent carry smoked king salmon and 5 percent carry smoked sockeye salmon. Furthermore, although 37 percent of the retail seafood firms carry smoked Atlantic salmon as their only species of smoked salmon, an equal percentage carry Pacific salmon as their only species of smoked salmon and 26 percent carry both. Pacific species of smoked salmon are significantly less prevalent in the gourmet and restaurant sectors, where Atlantic salmon clearly dominates the smoked salmon market.

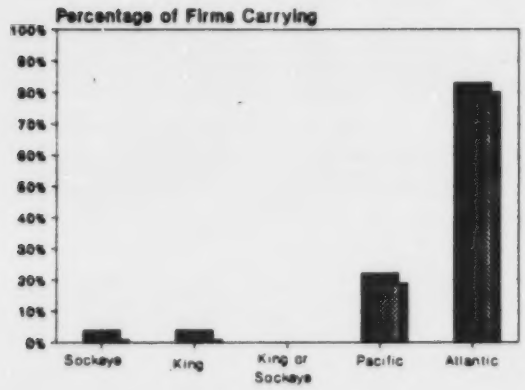
Exhibit 3.14

Species Carried by Market Segment

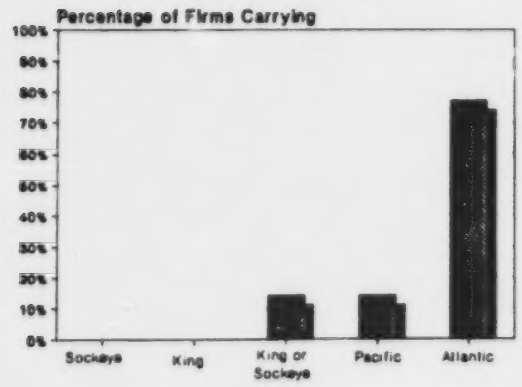
Seafood Retail (N=19)



Gourmet Stores (N=23)



Restaurants (N=22)



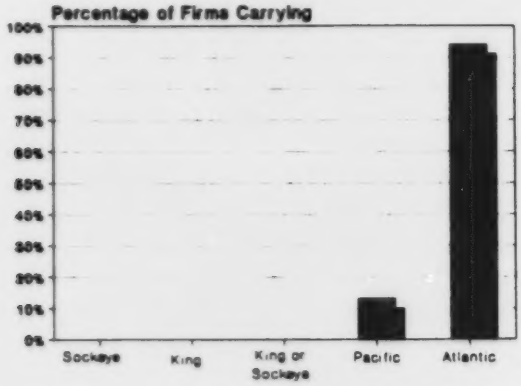
3.5.3 Regions

The dominance of Atlantic salmon is clearly evident in all regions except for the West where, not surprisingly, Pacific species of smoked salmon are more prevalent than smoked Atlantic salmon. In the West region, 48 percent of the firms carried Atlantic smoked salmon, while 44 percent carried an unspecified Pacific species of smoked salmon, 22 percent carried smoked king salmon, 9 percent carried smoked king or sockeye salmon and 4 percent carried smoked sockeye salmon (Exhibit 3.15). Furthermore, 52 percent of the responding firms in the West carried Pacific species of smoked salmon as their only smoked salmon, 30 percent carried smoked Atlantic salmon only and 17 percent carried both. In the Chicago region, 50 percent of the firms carried Atlantic salmon as their only smoked salmon, while 33 percent carried Pacific salmon as their only species of smoked salmon and 17 percent carried both (Appendix B). Smoked Atlantic salmon is much more prevalent in the other four regions (New England, New York City, Mid Atlantic and South), where relatively few firms carry Pacific species of smoked salmon.

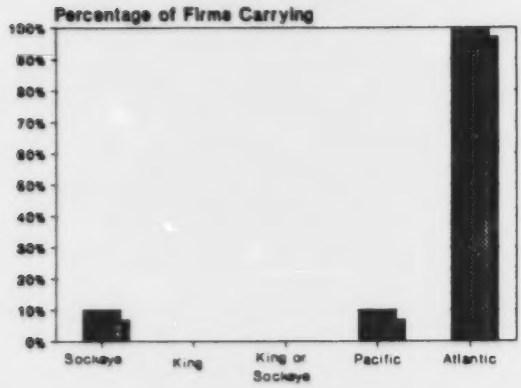
Exhibit 3.15

Species Carried by Region

New England (N=16)



New York City (N=10)



Mid Atlantic (N=3)

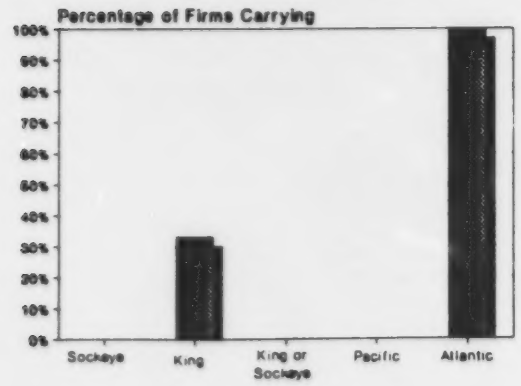
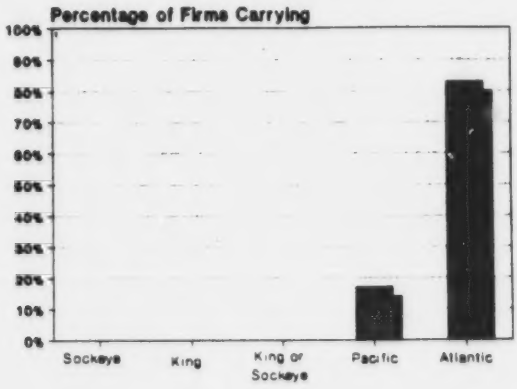


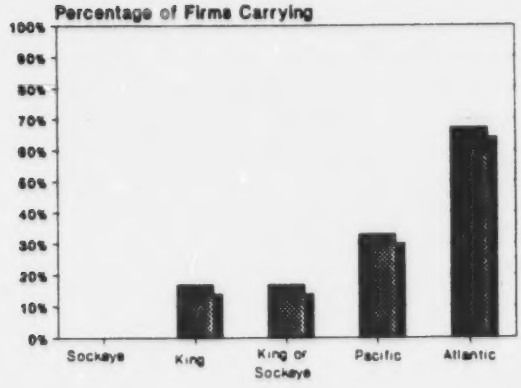
Exhibit 3.15 (Cont.)

Species Carried by Region (Cont.)

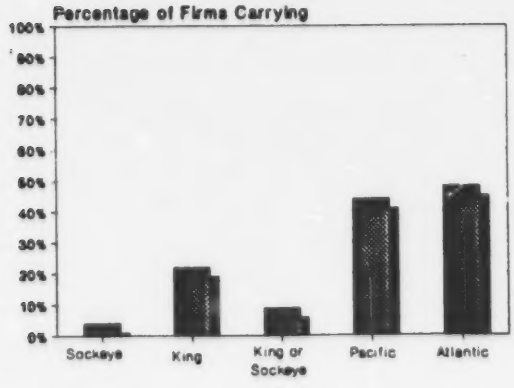
South (N=6)



Chicago (N=6)



West (N=23)



3.6 BRANDS

Of those firms who carried smoked salmon, when asked to identify the brand names of the smoked salmon products that they carried, 68 percent of the firms were able to identify them by either a region of origin, a specific name brand, or both, and the remainder could not make such an identification. However, of those products identified, 56 percent were identified in terms of region of origin, 27 percent in terms of brand and 17 percent by both region of origin and brand. Of the products identified by a region of origin, Norway was mentioned the most often, accounting for 41 percent of all products of which a region of origin was identified, followed by Scotland with 21 percent, the U.S. with 18 percent, Canada with 9 percent and Ireland with 7 percent of the responses. Generally speaking, respondents knew the region of origin immediately while producing the brand name often required some checking. This may suggest that a generic marketing campaign would be more effective in terms of consumer recognition than brand-specific advertising.

Chapter 4

BEST SELLING PRODUCTS

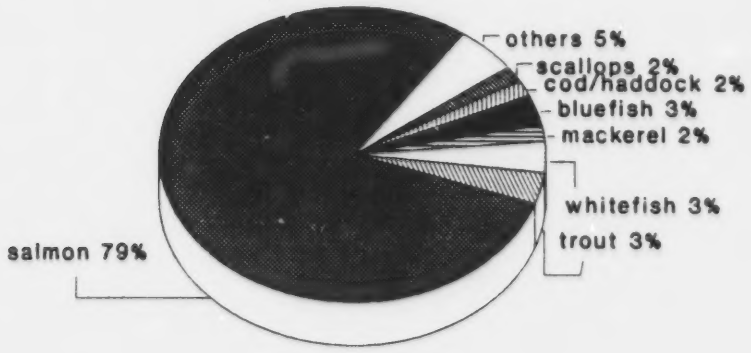
4.1 SMOKED SEAFOOD

4.1.1. Overall

Among all the firms responding, smoked salmon is by far the best selling smoked seafood product with 79 percent of the firms claiming salmon to be their top seller (Exhibit 4.1). No other smoked fish or shellfish was given as a best seller by more than 5 percent of firms.

Exhibit 4.1

Best Selling Smoked Seafood



Overall

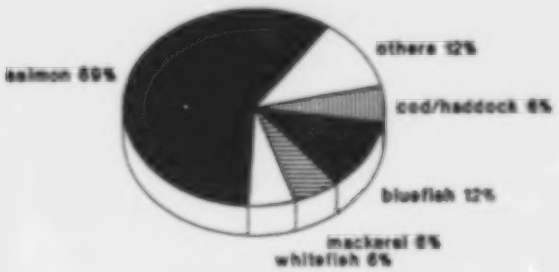
N = 58

4.1.2. Market Segments

Among all the market segments examined, smoked salmon is the best seller of all smoked seafood products (Exhibit 4.2). Despite the fact that the gourmet segment had the greatest average number of species of smoked seafood per firm, all firms responding in this segment indicated that smoked salmon was their best seller. In the seafood retail segment, smoked salmon was the best seller for 59 percent of the firms, whereas bluefish was mentioned by 12 percent of the firms as the best seller, and whitefish, mackerel, and cod/haddock were mentioned by 6 percent of the responding firms, respectively.

Exhibit 4.2

Best Selling Smoked Seafood By Market Segment



Seafood Retail
N = 17

Gourmet Stores
N = 10

Restaurants
N = 22

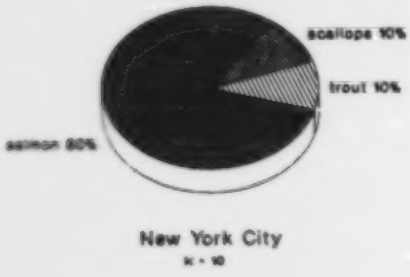
4.1.3 Regions

Exhibit 4.3 shows best selling smoked seafood products by region. As in the market segments smoked salmon is by far the best selling smoked seafood of all. Only in the New England region was a significant percentage of best selling smoked seafood accounted for by products other than smoked salmon, including smoked bluefish, mentioned by 15 percent of the firms and cod/haddock mentioned by 8 percent of the firms. Note that responses in the Chicago, South, and Mid-Atlantic areas are few and should be interpreted with extreme caution.

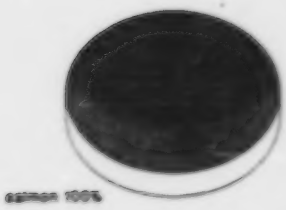
Exhibit 4.3

Best Selling Smoked Seafood By Region

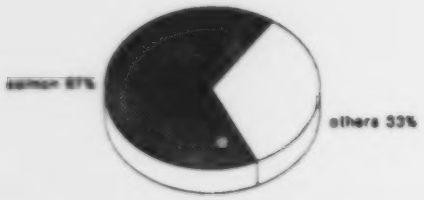
New England
N = 19



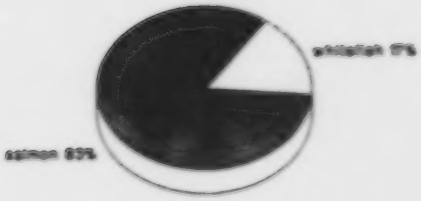
New York City
N = 10



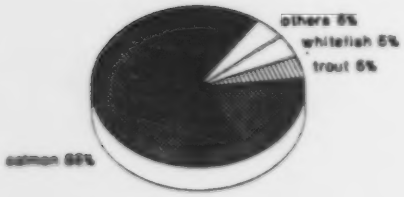
Mid Atlantic
N = 4



South
N = 3



Chicago
N = 6



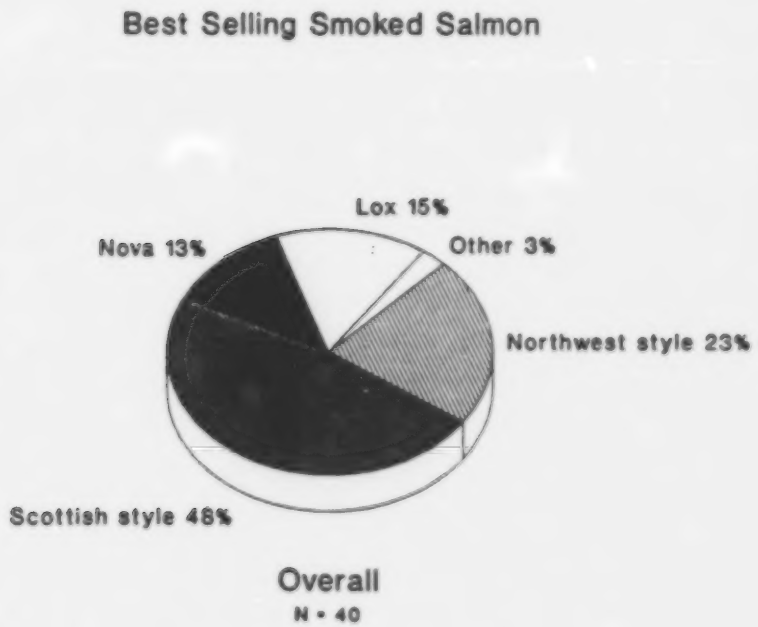
West
N = 33

4.2 SMOKED SALMON

4.2.1 Overall

When respondents indicated that salmon was their best selling smoked seafood they were then asked what type of smoked salmon was their best seller. Among all firms responding, Scottish style smoked salmon was clearly the best seller smoked salmon product. Scottish style smoked salmon was the top selling product for 48 percent of the responding firms, followed by Northwest style with 23 percent, lox with 15 percent and nova with 13 percent (Exhibit 4.4).

Exhibit 4.4

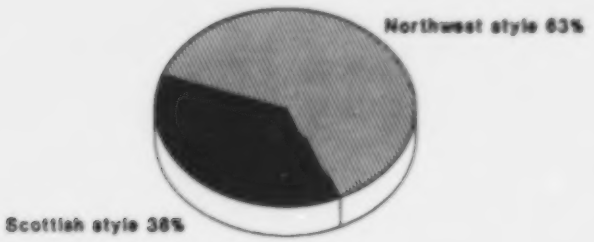


4.2.2 Market Segments

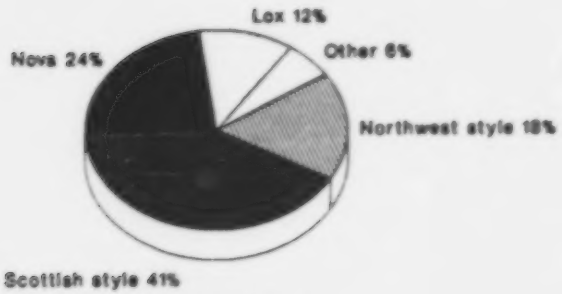
Exhibit 4.5 shows best selling smoked salmon products by market segment. Among gourmet stores and restaurants, Scottish style is the best selling type of smoked salmon with 60 percent of the restaurants and 41 percent of the gourmet stores claiming Scottish style to be their top selling product. Among seafood retailers, however, Northwest style is the best seller for 63 percent of firms responding, followed by Scottish style with 38 percent of the respondents (note the number of respondents is quite small). No other type of smoked salmon was mentioned as a best seller in the retail segment. Although Northwest style was indicated as a best seller by some firms in the gourmet and restaurant segments, it ranked behind nova in the gourmet segment and behind lox in the restaurant segment.

Exhibit 4.5

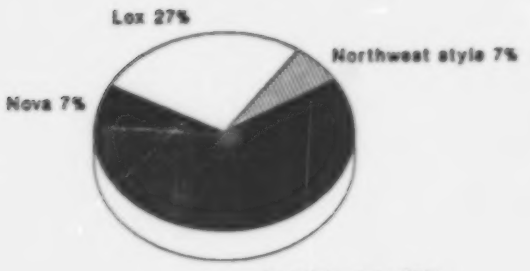
Best Selling Smoked Salmon By Market Segment



Seafood Retail
N = 8



Gourmet Stores
N = 17



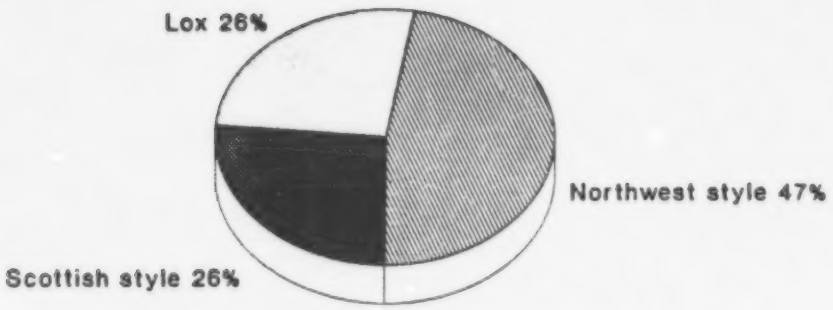
Restaurants
N = 15

4.2.3 Regions

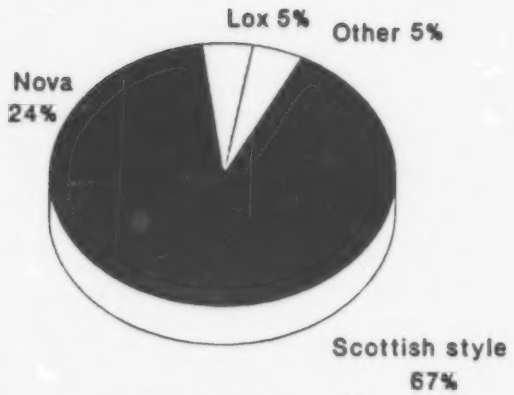
Exhibit 4.6 shows best selling smoked salmon products by region. Generally speaking, Scottish style was the top selling smoked salmon product except in the West region where Northwest style was indicated as the best seller by 47 percent of firms responding, followed by Scottish style and lox, each with 26 percent of the firms claiming these types as their best seller. Responses to this question were few in all regions except the West and should be viewed with appropriate caution. (See Appendix B).

Exhibit 4.6

Best Selling Smoked Salmon By Region



West
N = 19



Other Regions [1/]
N = 21

1/ - New England, New York City, Mid-Atlantic, South and Chicago were aggregated due to small individual sample sizes.

CHAPTER 5

SMOKED SALMON PREFERENCES

5.1 INTRODUCTION

In the survey, respondents were asked their preferences for certain key smoked salmon attributes with respect to their business and their customers. The respondent was asked to choose their preferred characteristic or indicate that they were indifferent between the following paired characteristics: farmed or wild salmon, Atlantic or Pacific salmon, pre-sliced or uncut, portions or sides, and Scottish style or Northwest style.

5.2 FARMED SALMON VERSUS WILD SALMON

5.2.1 Overall Sample and Market Segments

Overall, farmed salmon was slightly preferred to wild salmon, but many respondents were indifferent between the two. Respondents in the seafood retail segment had a clear preference for farmed salmon, where 53 percent preferred farm-raised smoked salmon versus 20 percent for wild and 27 percent being indifferent (Exhibit 5.1). In the gourmet segment, on the other hand, wild salmon

was preferred to farmed salmon but an equal number of firms were indifferent between the two choices as preferred wild. In the restaurant segment, farmed was slightly preferred to wild for smoked salmon, but most respondents were indifferent between the two.

5.2.2 Regions

As shown in Exhibit 5.2, there is no general preference pattern that is clearly visible among the regions for farmed or wild salmon. In many regions the percentage of respondents who are indifferent is equal or even superior to those who show a preference for smoked wild or farmed salmon.

Exhibit 5.1

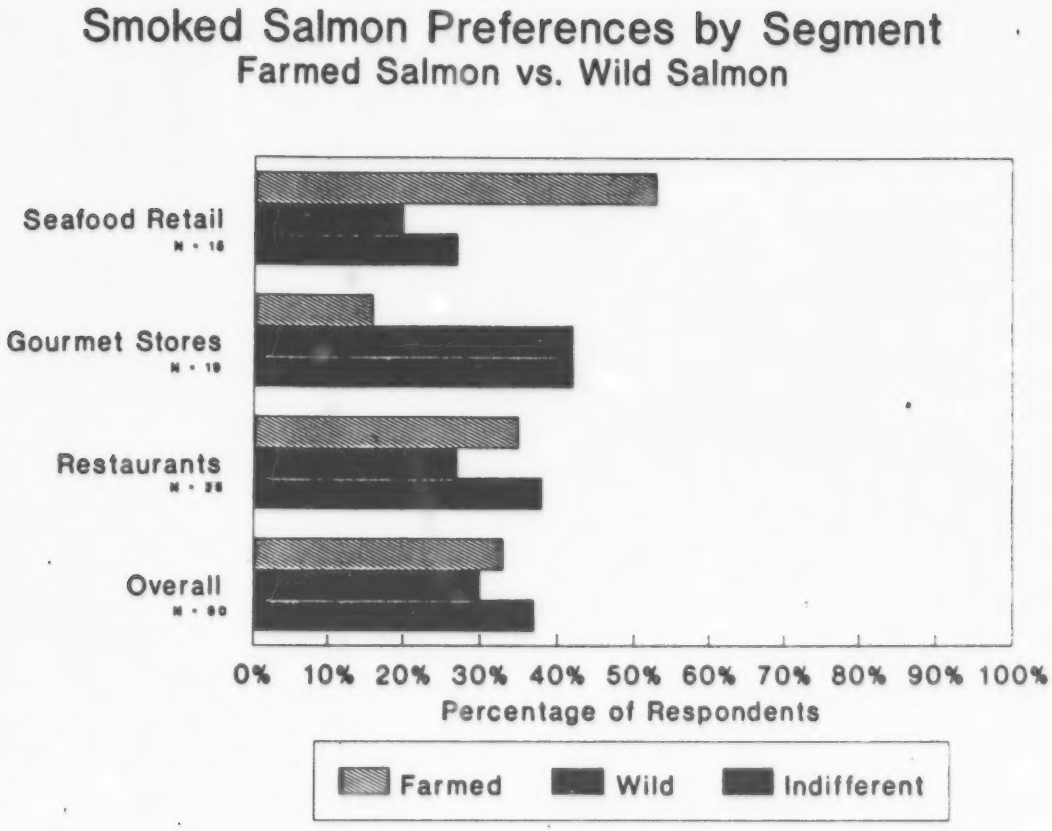
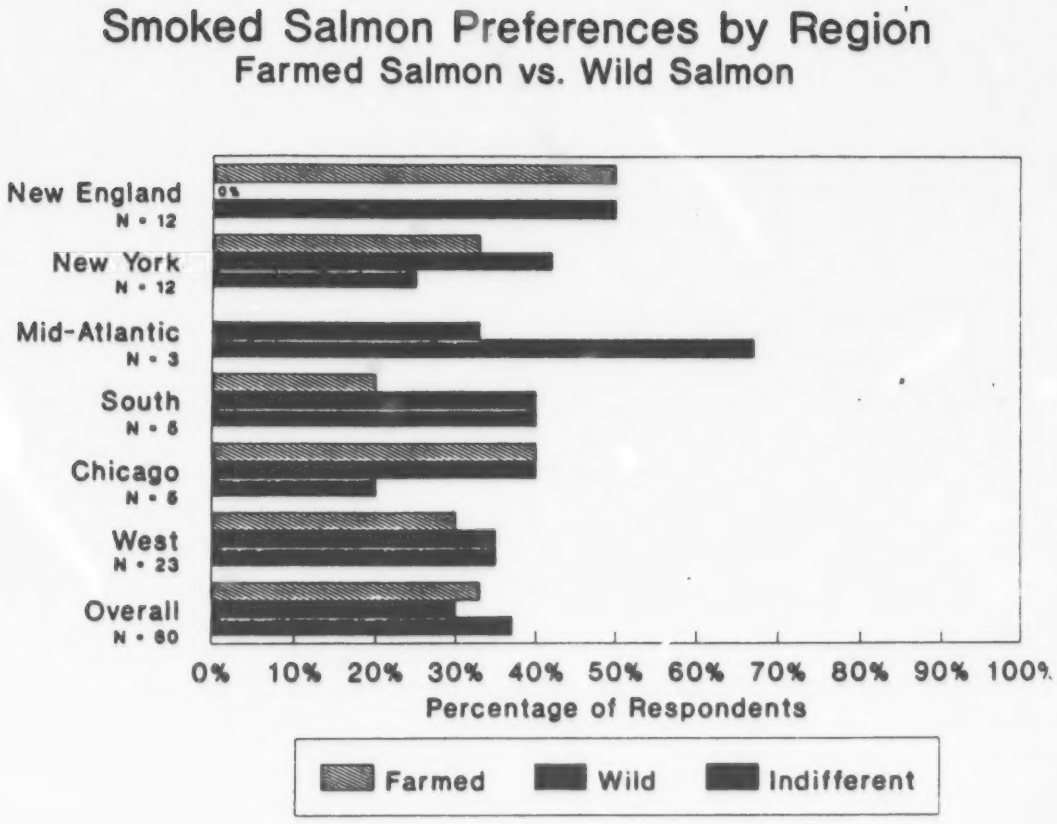

Smoked Salmon Preferences by Segment
Farmed Salmon vs. Wild Salmon
Seafood Retail
N = 15
Gourmet Stores
N = 19
Restaurants
N = 26
Overall
N = 80
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percentage of Respondents
Farmed
Wild
Indifferent

Exhibit 5.2


Smoked Salmon Preferences by Region
Farmed Salmon vs. Wild Salmon
New England
N = 12
New York
N = 12
Mid-Atlantic
N = 3
South
N = 5
Chicago
N = 5
West
N = 23
Overall
N = 60
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percentage of Respondents
Farmed
Wild
Indifferent

5.3 ATLANTIC SALMON VERSUS PACIFIC SALMON

5.3.1 Overall Sample and Market Segments

Overall, and across all market segments, most respondents clearly preferred Atlantic salmon to Pacific salmon for smoked salmon products. There was also a relatively low degree of indifference among respondents (19 percent overall) (Exhibit 5.3)

5.3.2 Regions

In all regions except the West, smoked Atlantic salmon was preferred to smoked Pacific salmon (Exhibit 5.4). In the West region, there was only a 5 percent difference in preference between Atlantic and Pacific salmon, with an additional 15 percent of the respondents indifferent between the two species. Although respondents in the Chicago region were unanimous in preferring Atlantic salmon to Pacific salmon the survey response to this question there and in the Mid-Atlantic and the South were limited. The statistics of these regions should therefore be viewed with caution.

Exhibit 5.3

Smoked Salmon Preferences by Segment
Atlantic Salmon vs. Pacific Salmon

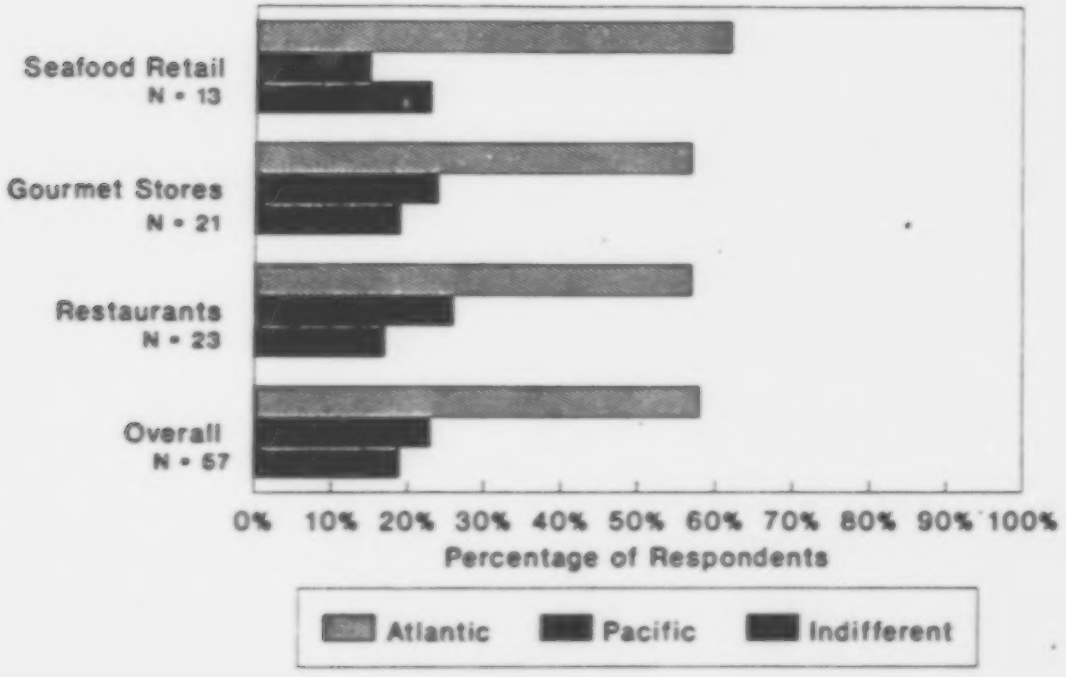
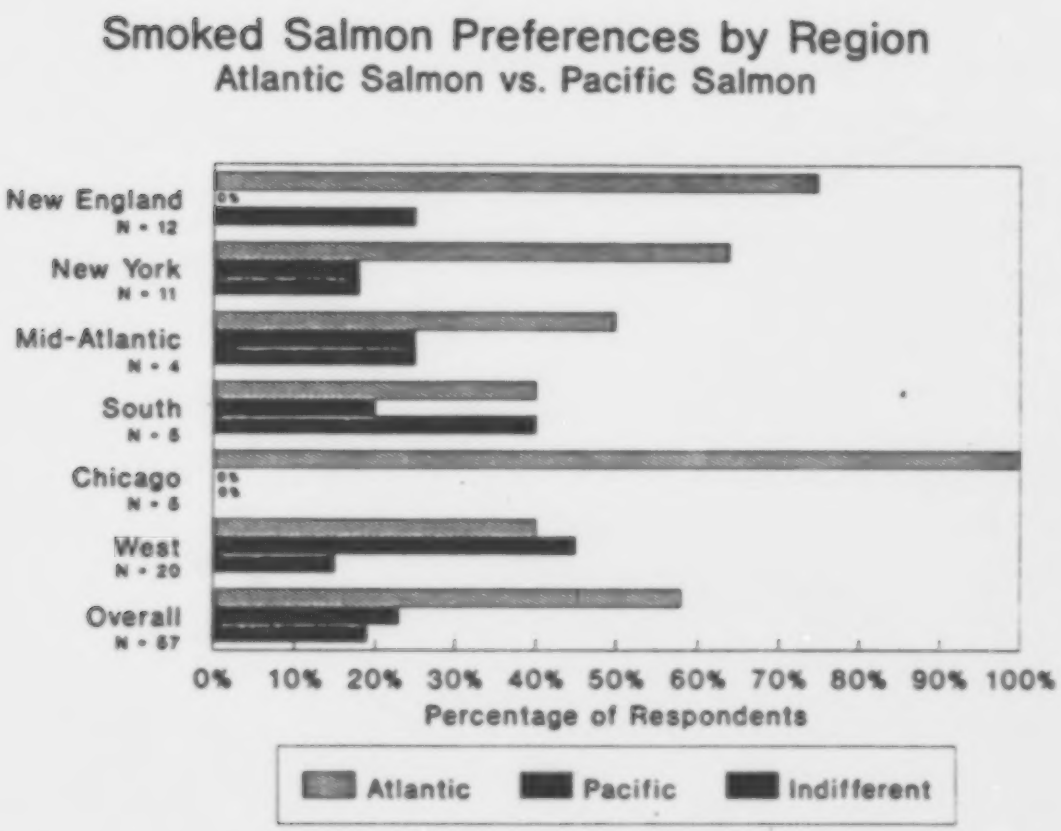


Exhibit 5.4


Smoked Salmon Preferences by Region
Atlantic Salmon vs. Pacific Salmon
New England
N = 12
New York
N = 11
Mid-Atlantic
N = 4
South
N = 5
Chicago
N = 5
West
N = 20
Overall
N = 57
0%
0%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percentage of Respondents
Atlantic
Pacific
Indifferent

5.4 PRE-SLICED VERSUS UNCUT

5.4.1 Overall Sample and Market Segments

Overall, there is a preference for pre-sliced smoked salmon over uncut smoked salmon, with 53 percent of the total responding firms preferring pre-sliced, 42 percent preferring uncut and only 5 percent indifferent between the two. The retail seafood and restaurant segments had a clearer preference for pre-sliced product versus uncut with little indifference between the two. The gourmet segment, on the other hand, preferred pre-sliced smoked salmon as much as uncut and exhibited no indifference between the two.

5.4.2 Regions

Although pre-sliced was preferred by the majority overall sample, survey respondents in several regions indicated a clear preference for uncut smoked salmon (Exhibit 5.6). The New York City region showed the strongest preference for uncut smoked salmon with 73 percent of respondents preferring this product. New England and the West are the two regions in which respondents preferred pre-sliced over uncut by large margins. Results of the Mid-Atlantic, South and Chicago regions indicate a preference for uncut smoked salmon, but the sample size is small and warrants a cautious interpretation of the results.

Exhibit 5.5

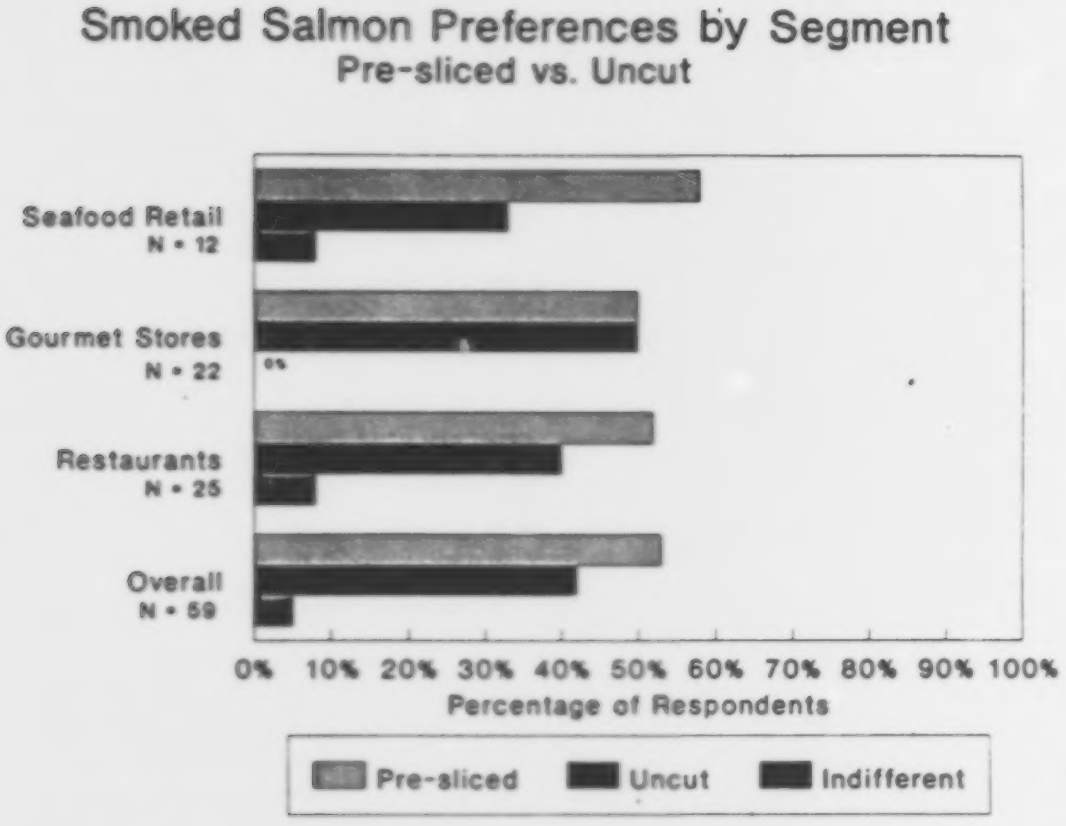
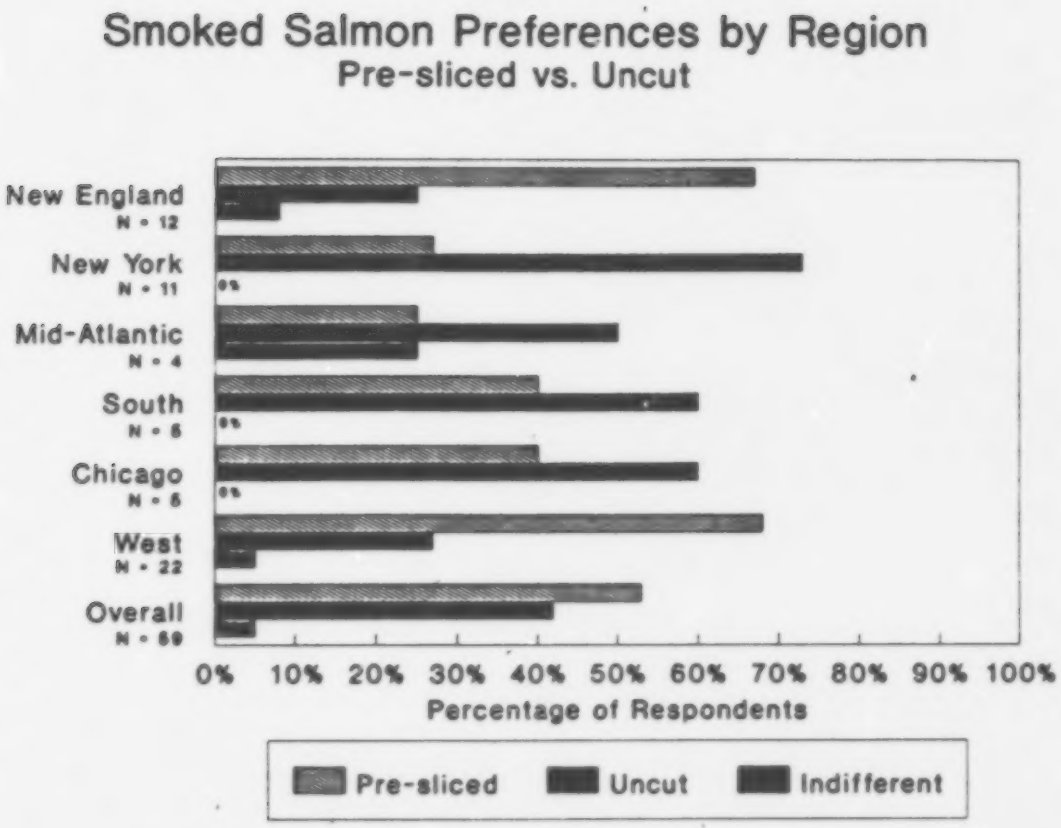

Smoked Salmon Preferences by Segment
Pre-sliced vs. Uncut
Seafood Retail
N = 12
Gourmet Stores
N = 22
Restaurants
N = 25
Overall
N = 59
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percentage of Respondents
Pre-sliced
Uncut
Indifferent

Exhibit 5.6


Smoked Salmon Preferences by Region
Pre-sliced vs. Uncut
New England
N = 12
New York
N = 11
Mid-Atlantic
N = 4
South
N = 5
Chicago
N = 5
West
N = 22
Overall
N = 59
0%
0%
0%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percentage of Respondents
Pre-sliced
Uncut
Indifferent

5.5 PORTIONS VERSUS SIDES

5.5.1 Overall Sample and Market Segments

In the overall sample there was a clear preference for sides versus portions with 74 percent of the responding firms preferring sides to portions and only 10 percent indifferent between the two (Exhibit 5.7). This preference is exhibited by all three market segments, most buyers clearly preferring sides of smoked salmon over portions with very little indifference towards these characteristics. This preference correlates closely with the dominant presence of smoked salmon sides in the marketplace as discussed in section 3.1. One should note, however, that this survey did not include supermarkets or grocery stores, which may have greater preference for portioned smoked products than was found in the market segments in this study.

5.5.2 Regions

As shown in Exhibit 5.8, the strong preference for sides is demonstrated in every region surveyed. Again, this clear preference correlates strongly with sides as the dominant product form characteristic of smoked salmon products carried by firms in all the regions surveyed.

Exhibit 5.7

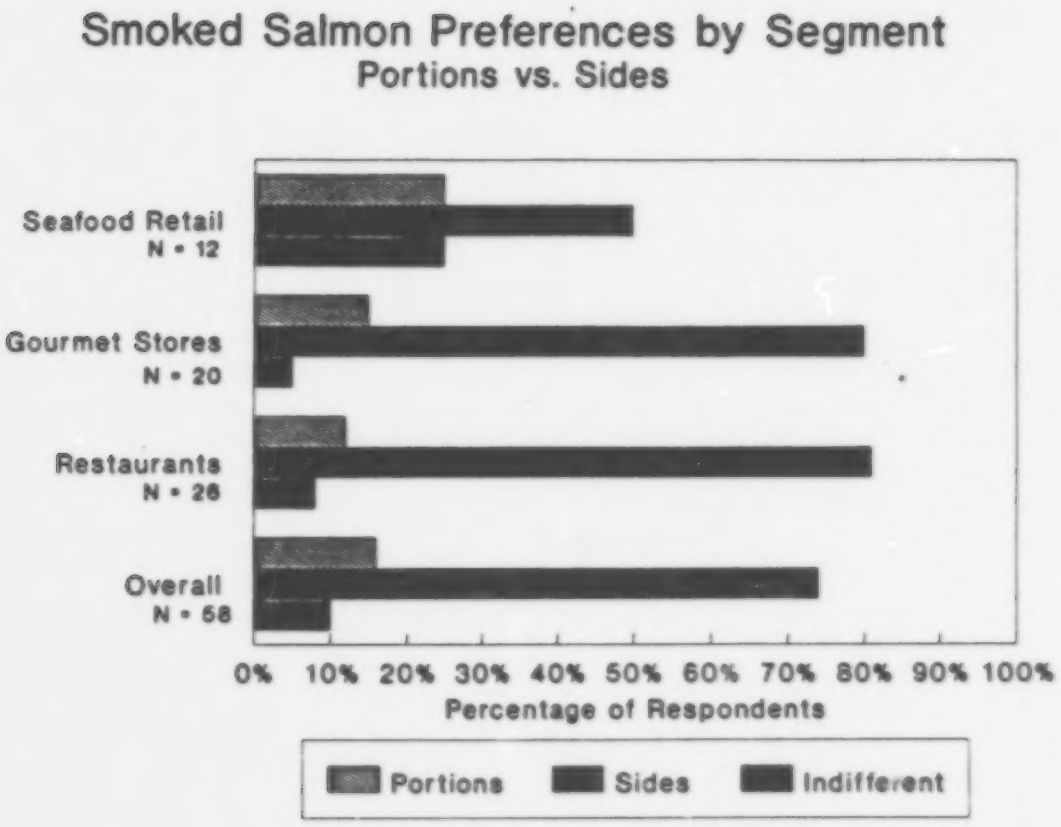
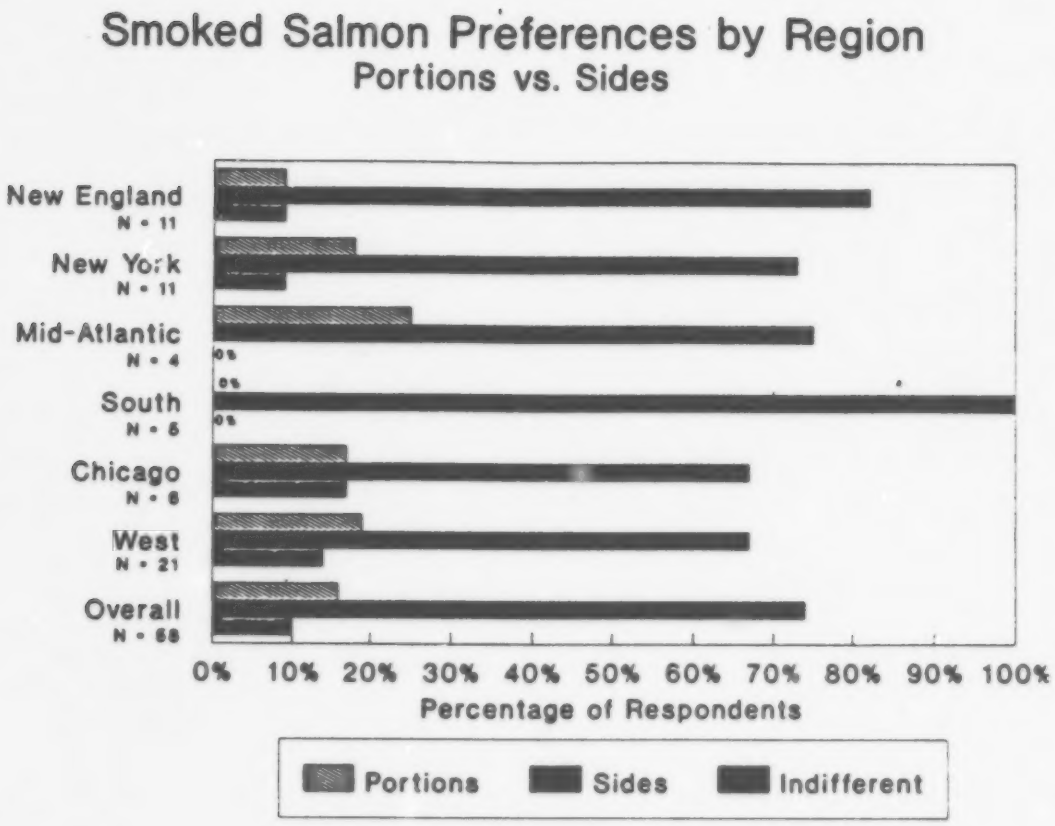

Smoked Salmon Preferences by Segment
Portions vs. Sides
Seafood Retail
N = 12
Gourmet Stores
N = 20
Restaurants
N = 26
Overall
N = 58
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percentage of Respondents
Portions
Sides
Indifferent

Exhibit 5.8


Smoked Salmon Preferences by Region
Portions vs. Sides
New England
N = 11
New York
N = 11
Mid-Atlantic
N = 4
South
N = 5
Chicago
N = 8
West
N = 21
Overall
N = 68
0%
0%
0%
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Percentage of Respondents
Portions
Sides
Indifferent

5.6 SCOTTISH STYLE VERSUS NORTHWEST STYLE

5.6.1 Overall Sample and Market Segments

Overall and across each market segment surveyed there was an overwhelming preference for Scottish style, cold-smoked salmon over Northwest style hot-smoked salmon with each segment exhibiting almost no indifference towards these choices (Exhibit 5.9). As many as 79 percent of the total number of firms responding preferred Scottish style to Northwest style, while 19 percent preferred Northwest style and a mere 2 percent were indifferent.

5.6.2 Regions

Scottish style smoked salmon was clearly preferred over Northwest style smoked salmon by respondents in all the regions surveyed (Exhibit 5.10). Northwest style received the most preference in the West region (Los Angeles, San Francisco and Seattle) where 39 percent of respondents preferred Northwest style to Scottish style.

Exhibit 5.9

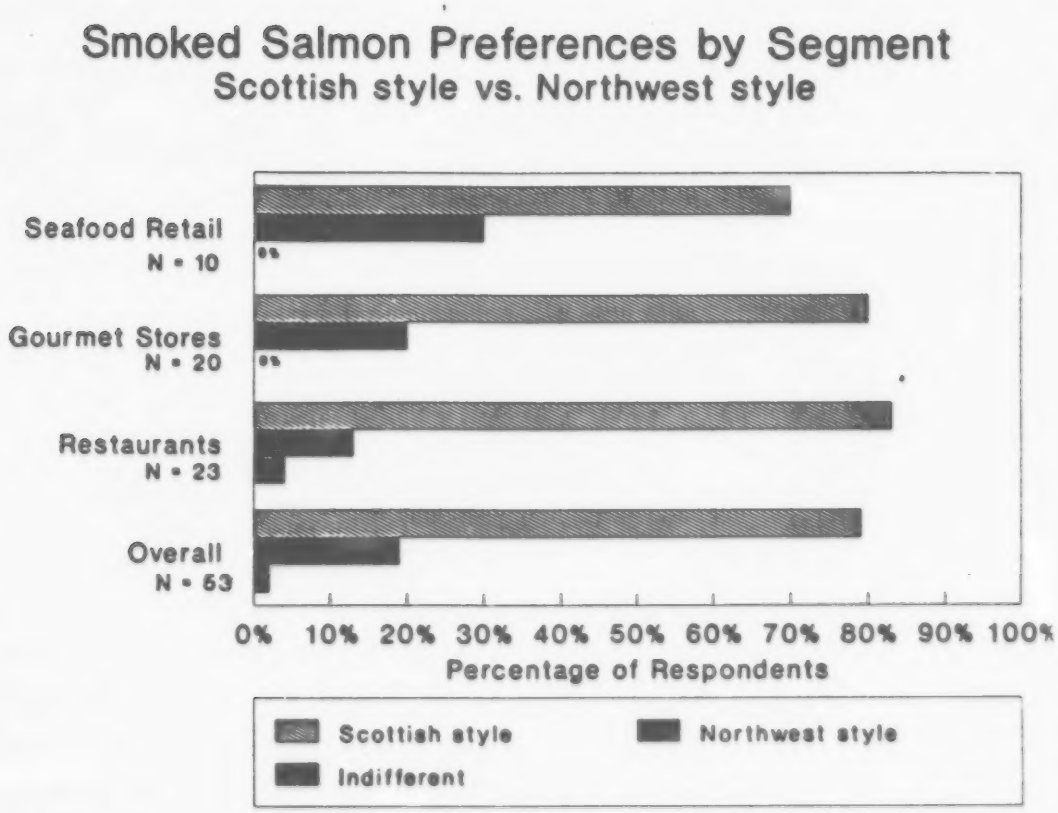
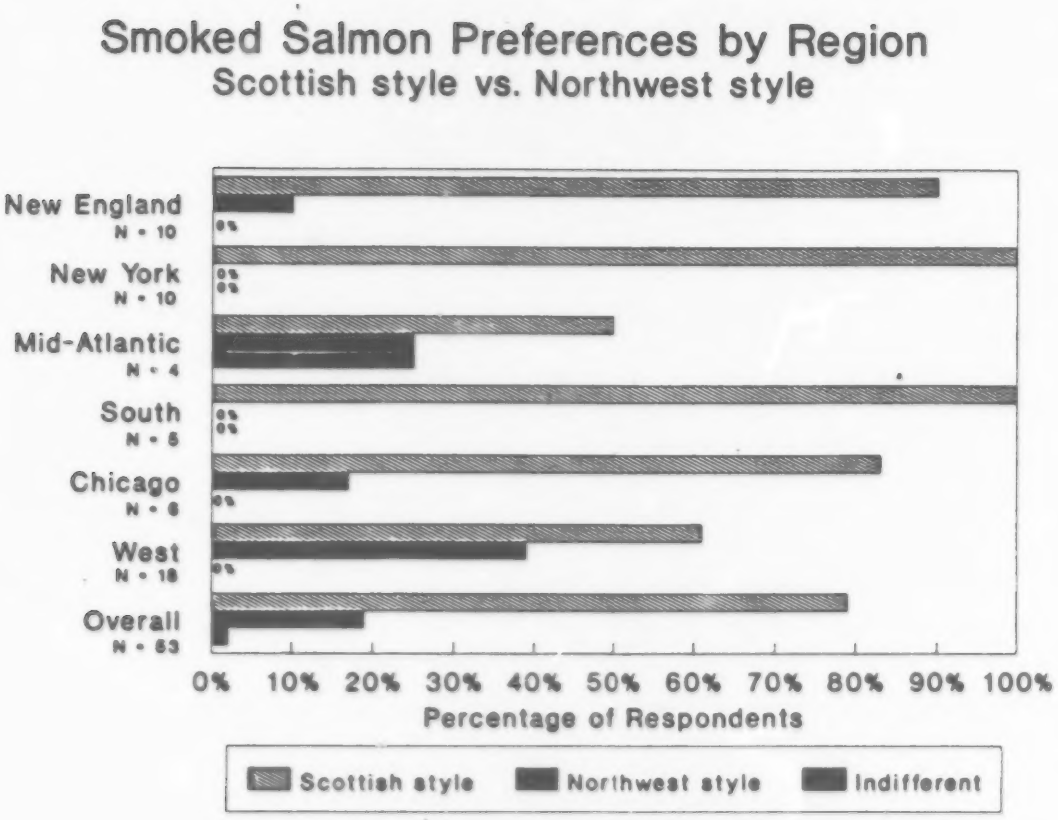

Smoked Salmon Preferences by Segment
Scottish style vs. Northwest style
Seafood Retail
N = 10
Gourmet Stores
N = 20
Restaurants
N = 23
Overall
N = 53
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percentage of Respondents
Scottish style
Northwest style
Indifferent

Exhibit 5.10


Smoked Salmon Preferences by Region
Scottish style vs. Northwest style
New England
N = 10
New York
N = 10
Mid-Atlantic
N = 4
South
N = 5
Chicago
N = 6
West
N = 18
Overall
N = 53
0%
0%
0%
0%
0%
0%
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percentage of Respondents
Scottish style
Northwest style
Indifferent

5.7 GENERAL SMOKED SALMON ATTRIBUTES

5.7.1. Background

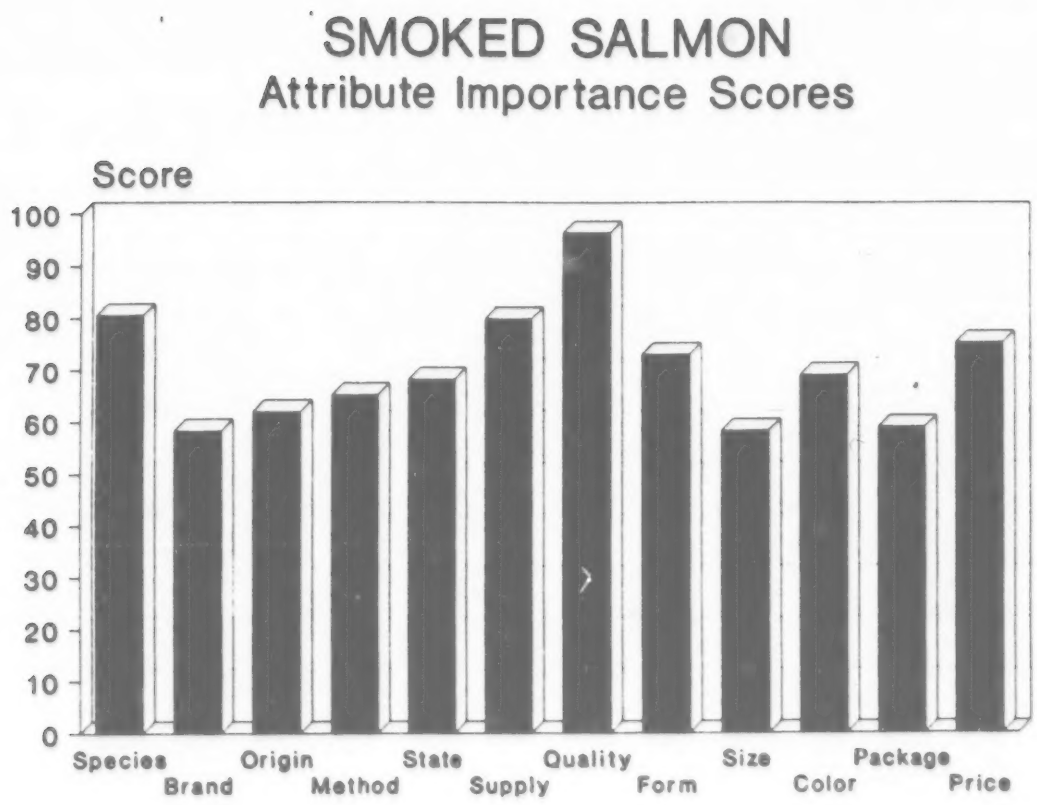
A survey of smoked salmon buyers in the Northeast U.S. was conducted in March 1989 and was similar in objectives to the current survey. Personal interviews with 28 buyers from Boston to Baltimore in the seafood retail, seafood wholesale and gourmet/deli sectors were conducted. Self-explicated utility measurement was utilized to determine buyer preferences for smoked salmon attributes (Green and Wind 1973). The results of those surveys are presented as an adjunct to the paired comparisons of the nationwide telephone survey.

5.7.2 Attribute Importance

Smoked salmon buyers were asked to rate the importance of 12 smoked salmon attributes on a scale of 0 to 100 with 100 being the most important. A number could be used more than once. Exhibit 5.11 shows the average importance scores of each attribute.

Quality, supply consistency and species were the most important smoked salmon attributes with quality rising above all others in importance. Brand, package and size of product were deemed to be the least important.

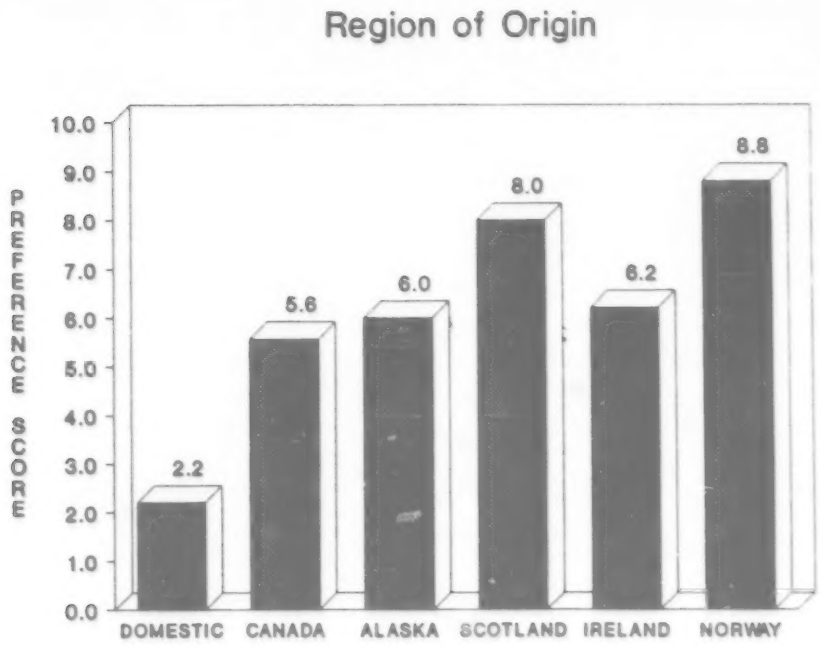
Exhibit 5.11


SMOKED SALMON
Attribute Importance Scores
Score
100
90
80
70
60
50
40
30
20
10
0
Species
Brand
Origin
Method
State
Supply
Quality
Form
Size
Color
Package
Price

5.7.3 Region of Origin

Smoked salmon buyers were also asked to indicate their preference for specific smoked salmon characteristics on a scale of 0 to 10 with 10 being the most preferred. Exhibit 5.12 shows preferences for various regions of origin of smoked salmon. Norway scored the highest followed by Scotland, and these two countries formed the top tier of preferred regions. The middle tier consisted of Canada, Alaska and Ireland. It is clear from both these surveys that Scotland and Norway have established strong reputations for quality.

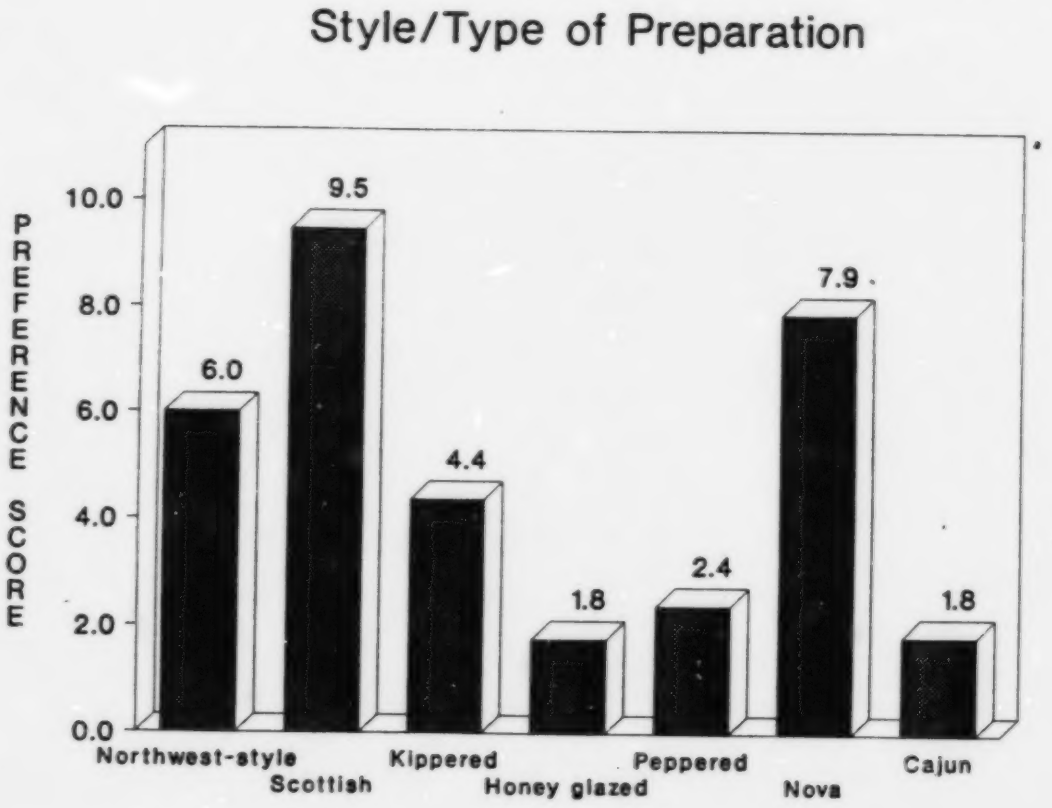
Exhibit 5.12



5.7.4 Style or Type of Preparation

Among Northeast salmon buyers, Scottish style is by far the most preferred preparation of smoked salmon (Exhibit 5.13). Next preferred is nova followed by Northwest style.

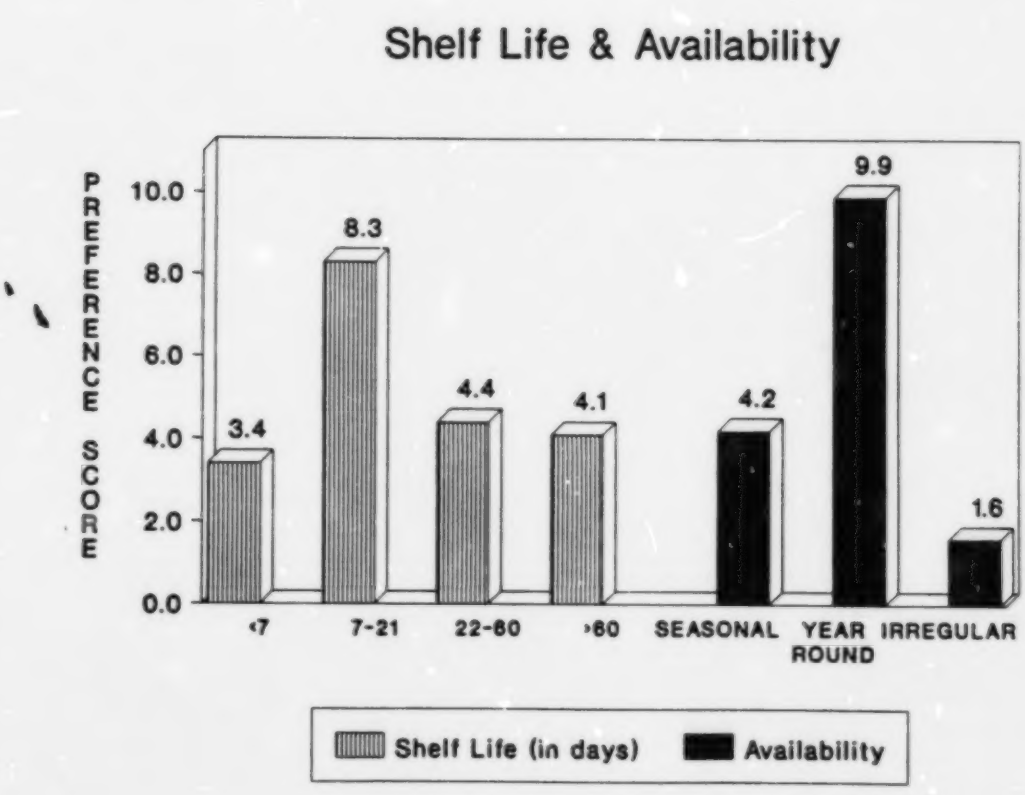
Exhibit 5.13



5.7.5 Shelf Life and Availability

Exhibit 5.14 shows preference scores for three ranges of shelf life and for three types of availability of smoked salmon. Smoked salmon with a shelf life of 1-3 weeks was strongly preferred over both shorter and longer shelf lives. In terms of availability of product, year round availability was predictably preferred to seasonal or irregular availability.

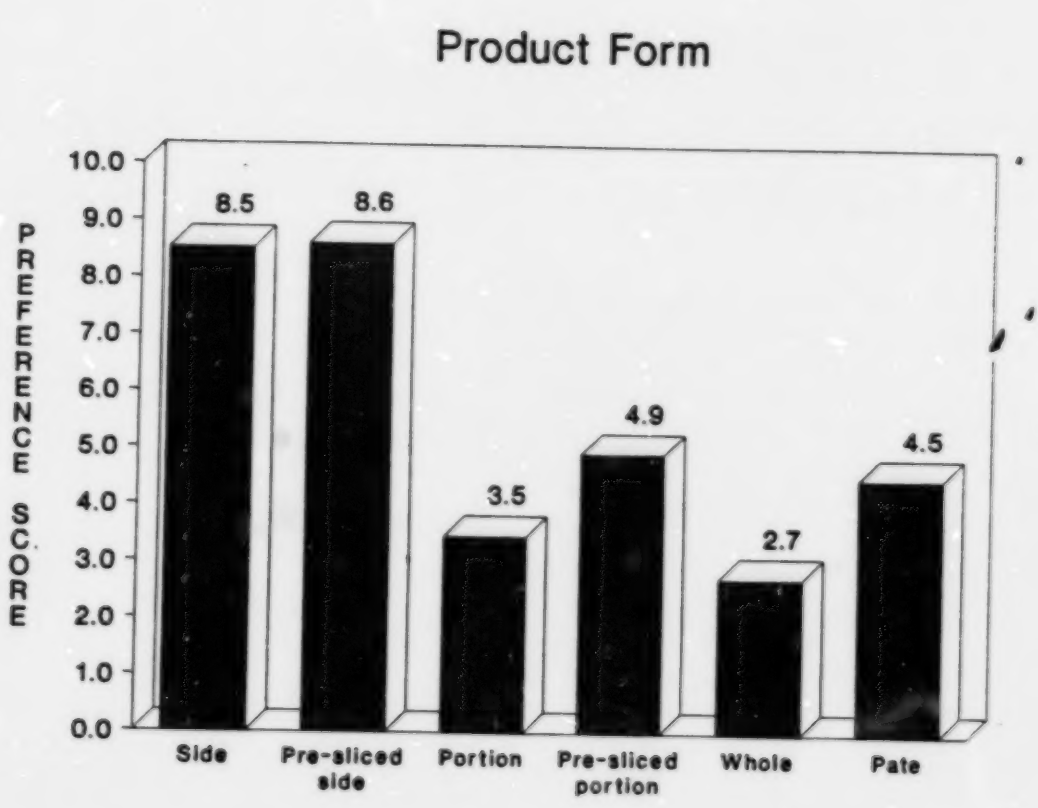
Exhibit 5.14



5.7.6. Product Form

Exhibit 5.15 presents preferences for different product forms which reinforce the results presented in sections 3.1, and 5.5. Smoked salmon buyers interviewed in the Northeast U.S. strongly preferred sides to portions and gave both pre-sliced and uncut sides nearly equal preference.

Exhibit 5.15



CHAPTER 6

SMOKED SALMON SALES

6.1 SALES TRENDS

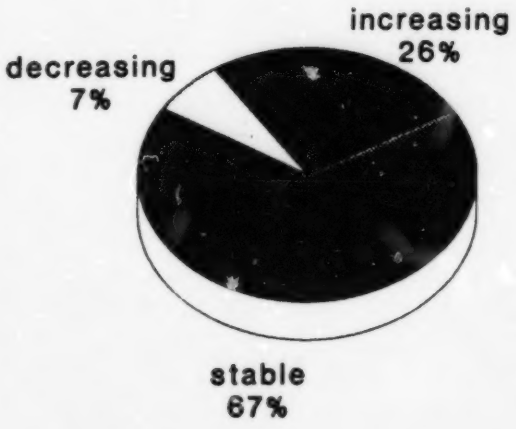
6.1.1 Overall Sample and Market Segments

Based on the results from the 1990 nationwide telephone survey, Exhibit 6.1 shows the sales trends during the past year in the overall sample and Exhibit 6.2 on the three market segments for both general smoked seafood and for smoked salmon. Overall, 67 percent of the firms carrying smoked seafood felt that sales of smoked seafood were stable. This proportion decreased to 63 percent of the responding firms where sales of smoked salmon were concerned. A similar pattern was found across the three market segments, where a significant proportion of the respondents felt that sales were stable for both smoked seafood and smoked salmon. The percentage of respondents reporting stable sales was the least in the seafood retail segment and was the greatest in the restaurant segment, and this pattern was consistent for general smoked seafood and smoked salmon. In the seafood retail segment, a larger percentage of firms indicated increasing sales for smoked seafood overall than for smoked salmon; 56

Exhibit 6.1

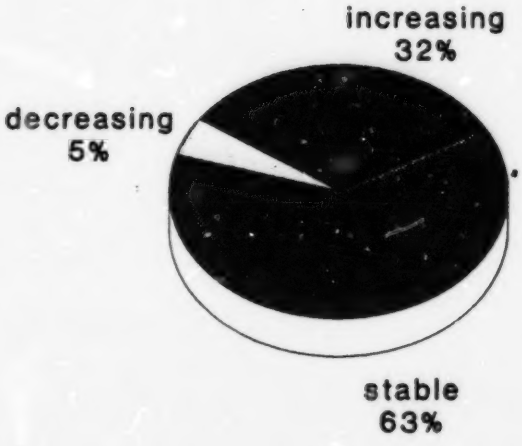
Sales Trend During the Past Year

Smoked Seafood



N = 46

Smoked Salmon



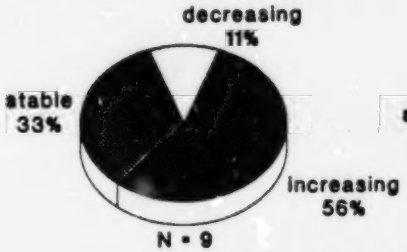
N = 62

Overall

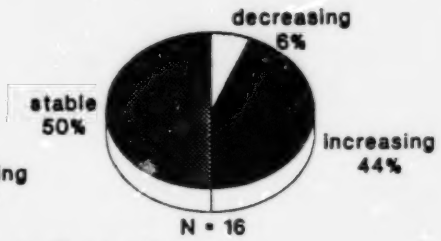
Exhibit 6.2

Sales Trends During the Past Year
By Market Segment

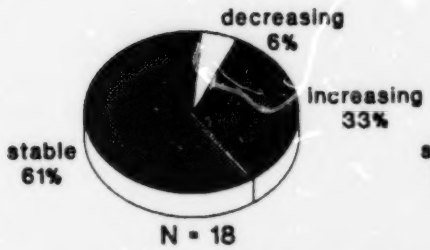
Smoked Seafood

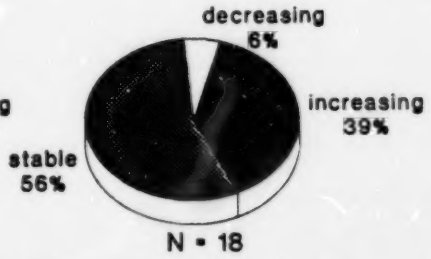


Smoked Salmon

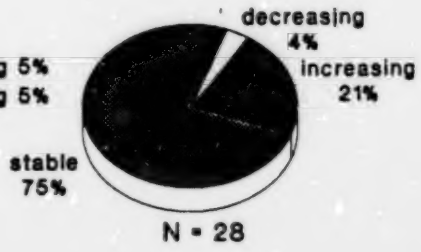


Seafood Retail





Gourmet Stores



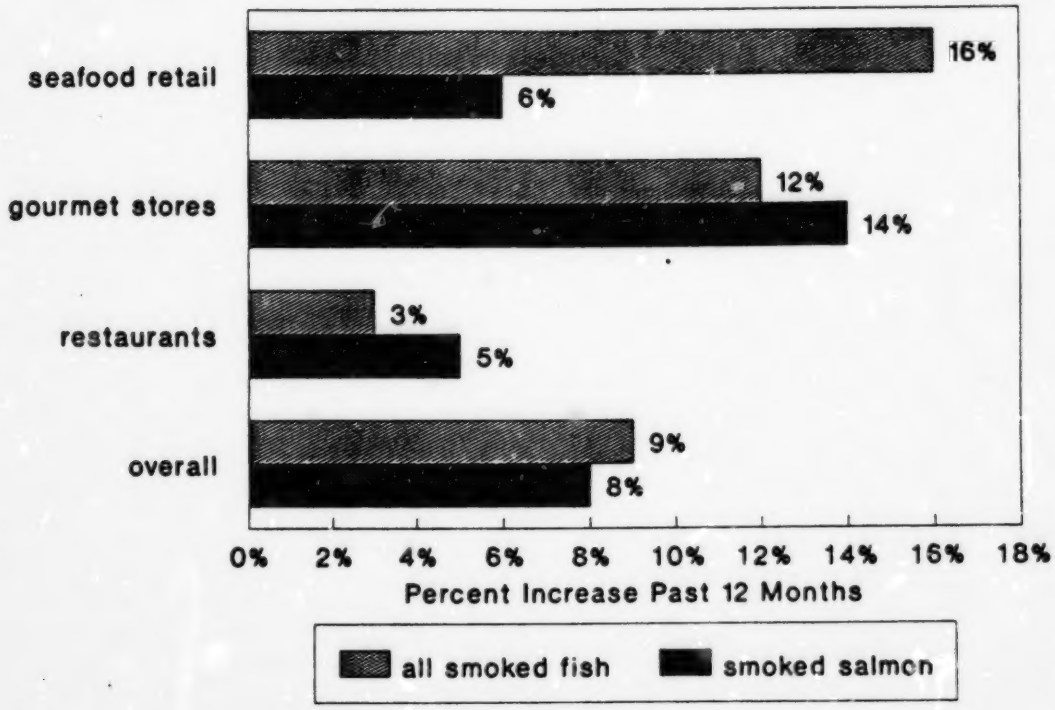
Restaurants

percent of the responding retail seafood firms said that sales of smoked seafood were increasing, while 44 percent said that sales of smoked salmon were increasing. Among gourmet stores who reported sales trends, patterns were similar between smoked seafood and smoked salmon with most firms reporting stable or increasing sales in each category. In the restaurant segment, a larger percentage of surveyed firms reported increasing sales for smoked salmon than for general smoked seafood, although most firms reported stable sales of both.

Firms were then asked to quantify the percentage change in their smoked seafood and smoked salmon sales over the past year. The average percentage change in sales volume is reported in Exhibit 6.3. In the total sample of responding firms there was an average 8.8 percent increase in smoked seafood sales in the past year and a 7.7 percent average increase in smoked salmon sales. For gourmet stores and restaurants, smoked salmon sales were outpacing smoked fish sales, but among seafood retailers in this survey, smoked fish sales had increased at a greater rate than smoked salmon.

Exhibit. 6.3

Average Increase in Sales Trends
By Market Segment



6.1.2 Regions

Across all regions, most respondents reported stable or increasing sales for smoked seafood and smoked salmon, with few experiencing decreasing sales (Exhibit 6.4). Note the small sample size in the Mid-Atlantic, South and Chicago regions.

Percent changes in overall sales in the past year by region are shown in Exhibit 6.5. Except for the Mid-Atlantic region, where there had been no perceived net increase in the average sales, sales of smoked seafood and smoked salmon had increased in every region. Sales of smoked salmon were also increasing generally faster than smoked seafood except in New England, South and Chicago, where percentage increases in the sales of smoked salmon were greater than those pertaining to the sales of smoked seafood. Note, however that the responses in the Chicago, South, and Mid-Atlantic regions are few, and hence the statistics may not be representative of these regions.

Exhibit 6.4

Sales Trends During the Past Year
By Region

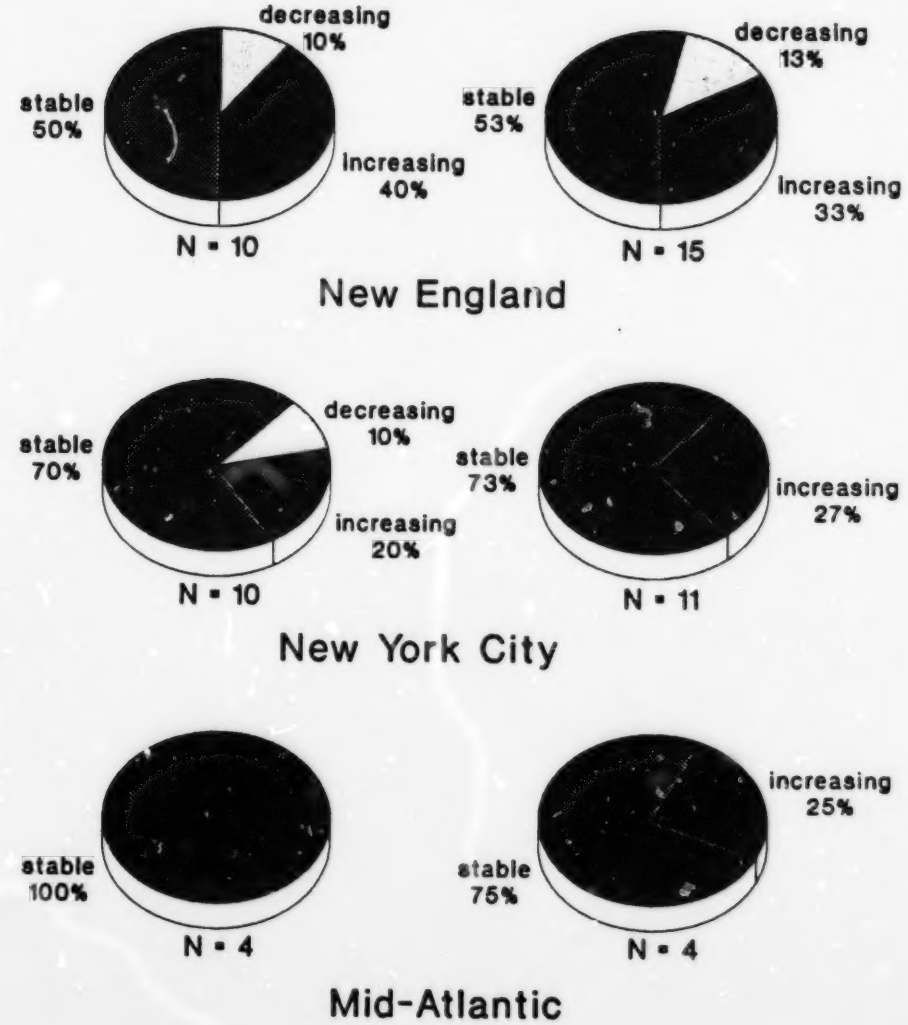
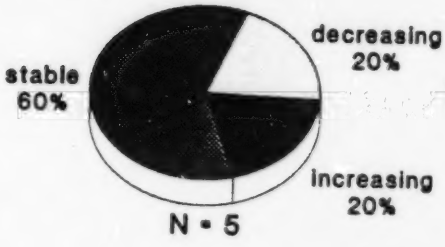


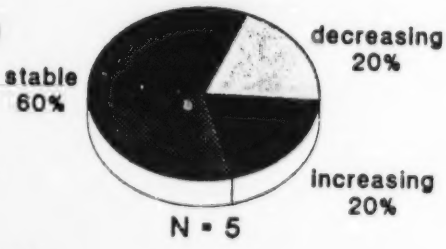
Exhibit 6.4 (Cont.)

Sales Trends During the Past Year
By Region (Cont.)

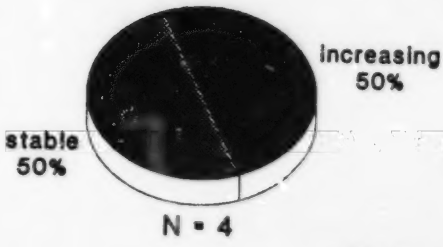
Smoked Seafood

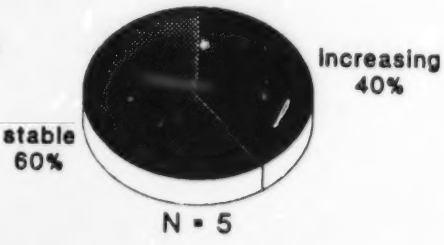


Smoked Salmon

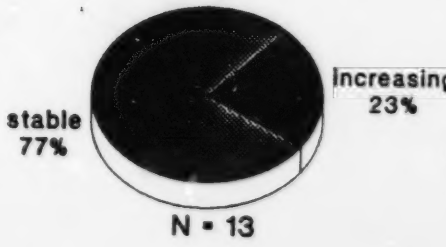


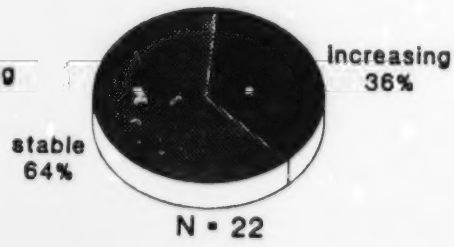
South





Chicago

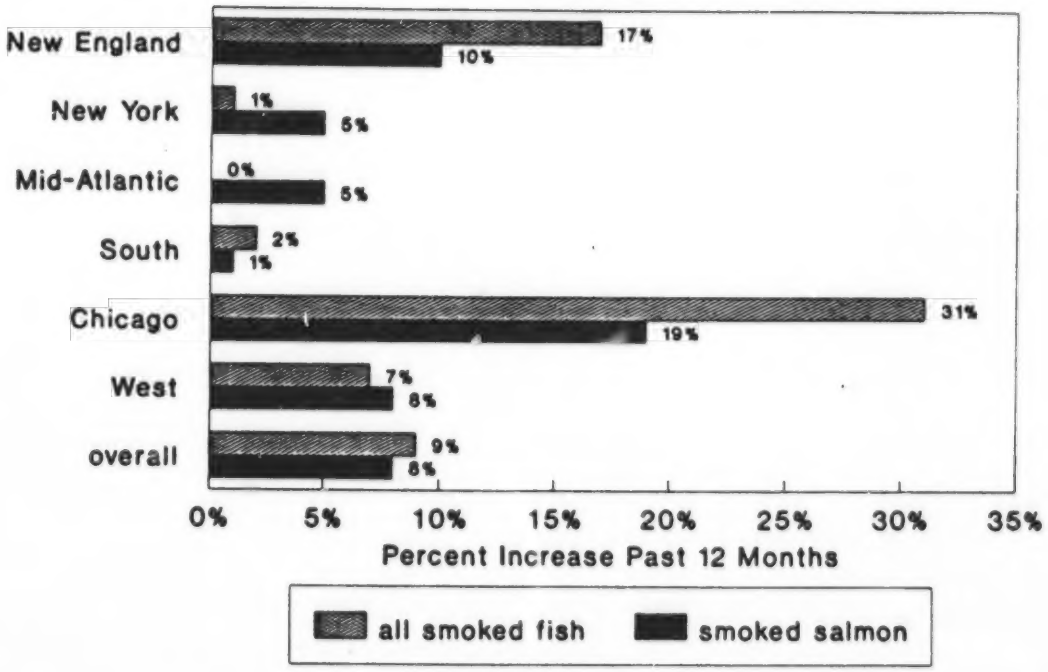




West

Exhibit 6.5

Average Increase in Sales Trends by Region



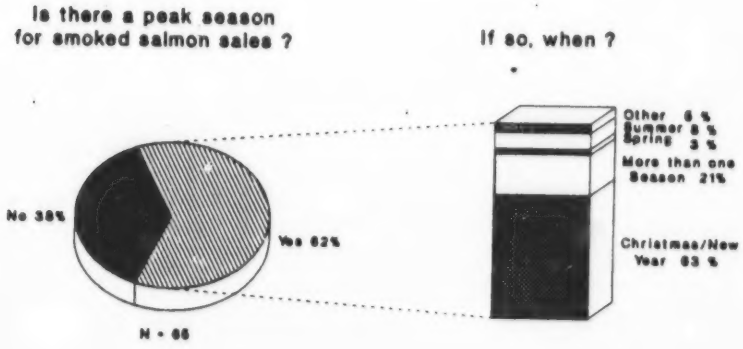
6.2 SEASONALITY OF SMOKED SALMON SALES

6.2.1 Overall

Among all the firms responding to the survey, 62 percent indicated that there was a peak season for smoked salmon sales (Exhibit 6.6). Of those firms experiencing a peak season, 63 percent had peak sales during the winter holidays (Christmas or Hanukkah through New Year's Day). Another 21 percent indicated more than one peak sales period and most often this was Thanksgiving and the winter holidays. In general, then, among the firms in this survey, smoked salmon sales were concentrated during the latter part of the calendar year.

Exhibit 6.6

Peak Season for Smoked Salmon Sales



Overall

6.2.2 Market Segments

Exhibit 6.7 shows the seasonality of smoked salmon sales among the three market segments in the survey. Gourmet stores experienced the most seasonal sales with 90 percent of respondents reporting that there was a peak season for their smoked salmon sales, usually during Thanksgiving and the winter holidays. Smoked salmon sales were the least seasonal in the restaurant segment of the survey with only 35 percent of respondents having a peak season varying considerably from spring to summer to Thanksgiving and the winter holidays.

6.2.3. Regions

Exhibit 6.8 shows the seasonality of smoked salmon sales among the regions in the survey. For firms in every region but the South and New England, sales were mostly seasonal and concentrated during the winter holidays. In the South region, 4 of 5 firms responding did not experience a peak sales period. In New England, 50 percent of the firms experienced seasonality in sales (usually during Christmas-New Year) while 50 percent did not.

Exhibit 6.7

Peak Season for Smoked Salmon Sales
By Market Segment

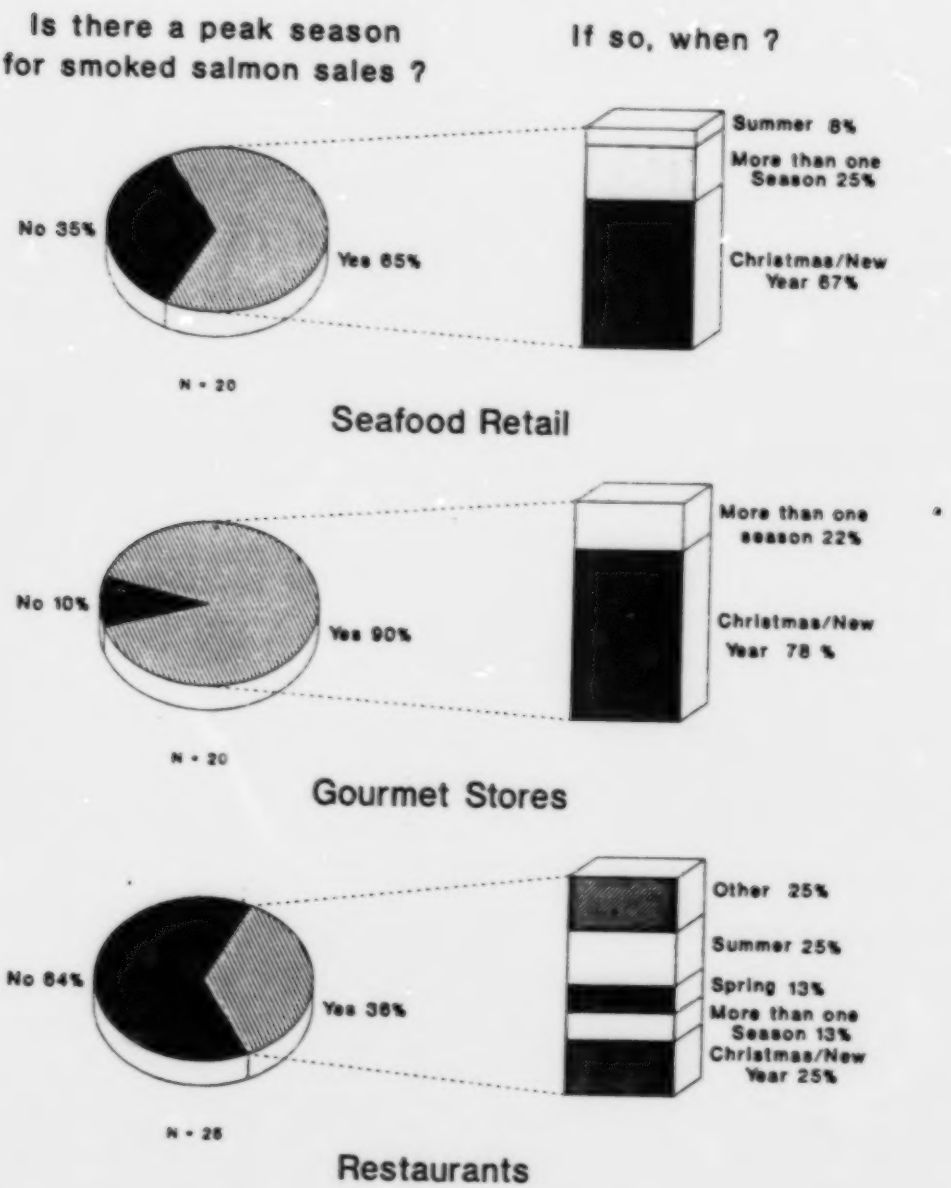


Exhibit 6.8

Peak Season for Smoked Salmon Sales By Region

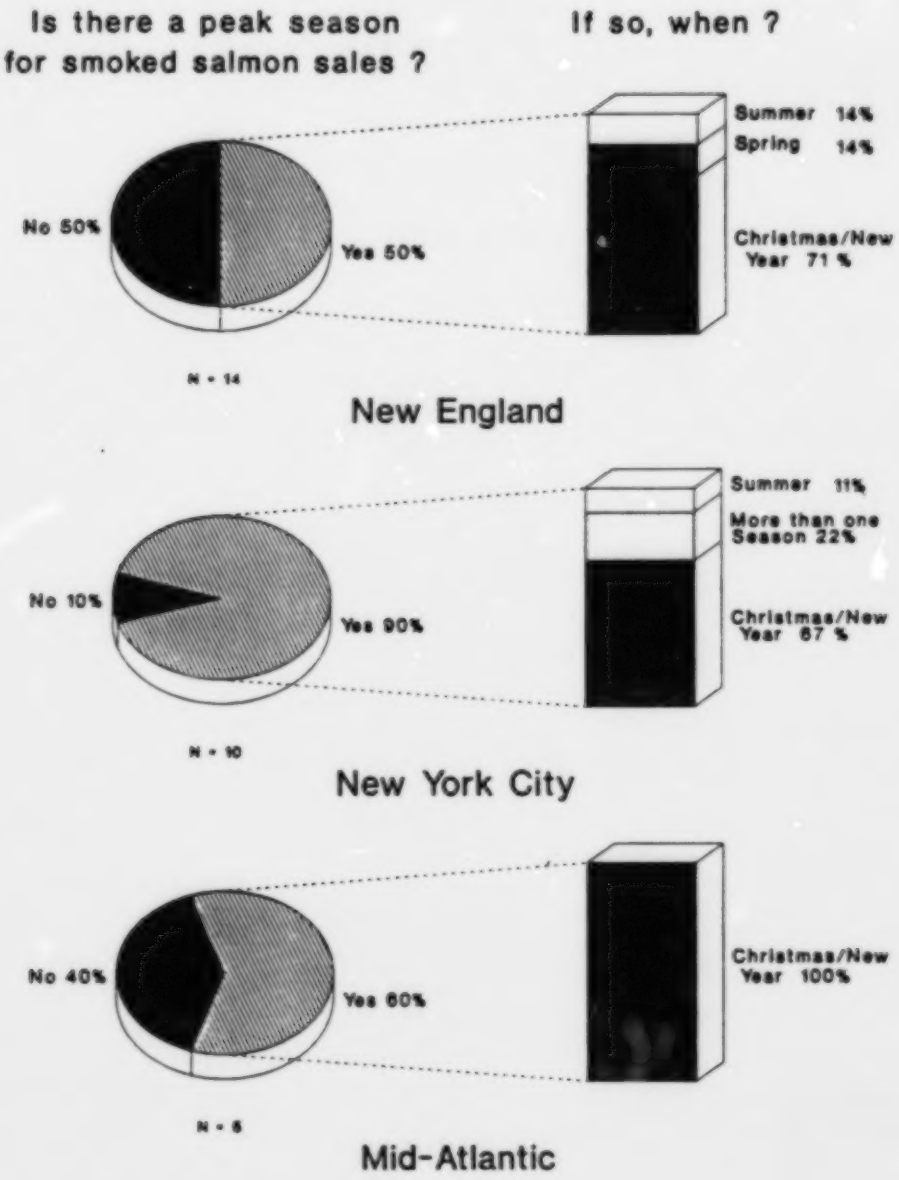
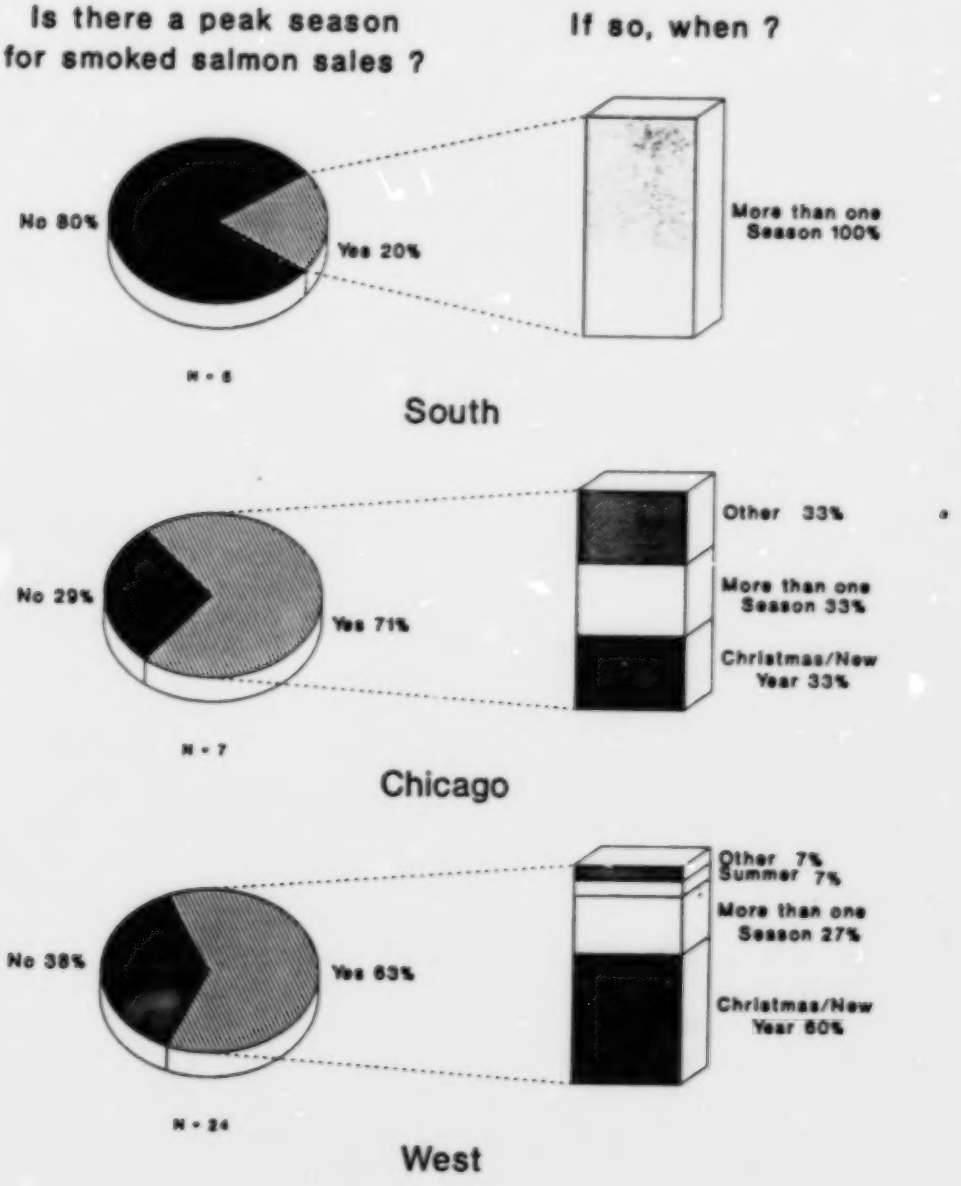


Exhibit 6.8 (Cont.)

Peak Season for Smoked Salmon Sales By Region (Cont.)



6.3. SMOKED SALMON WHOLESALE PRICES

6.3.1 Overall Sample and Market Segments

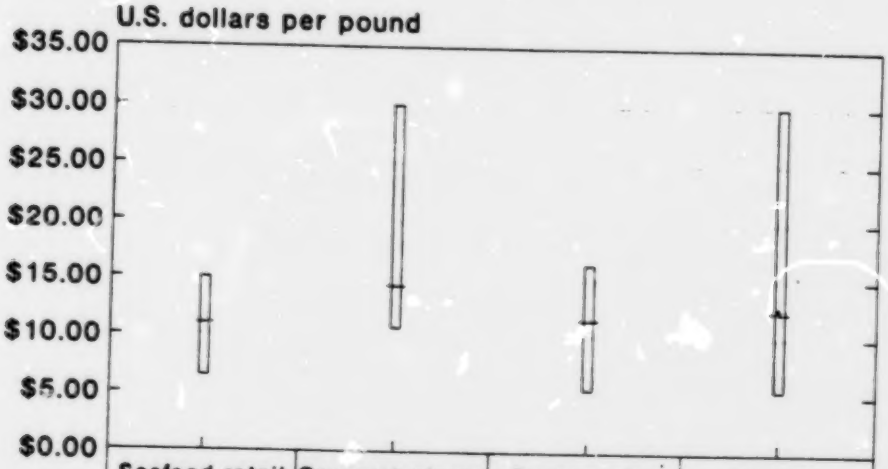
As shown in Exhibit 6.9, gourmet stores paid the highest average wholesale price of the market segments examined at US$14.35 per pound, and also had the widest range of prices. The higher range estimate of US$30.00 per pound seems too high and may be an error attributable to a misunderstanding of the question by the responding firm. Seafood retail firms paid the lowest average wholesale price while restaurants paid somewhat more. The range of wholesale prices paid by these two market segments were comparable. In the overall sample, the average wholesale price reported was US$12.28.

6.3.2. Regions

The average wholesale prices paid by firms in the six regions varied by US$4.31 per pound or less as shown in Exhibit 6.10. Firms in the New England and New York City regions paid similar wholesale prices which differed by only 2 percent and their average wholesale prices were approximately 13 percent higher than those in the Chicago or West regions. Firms in the South region had the lowest average wholesale price, however, the number of responses to this question were few and so the statistics may not be representative of this market.

Exhibit 6.9

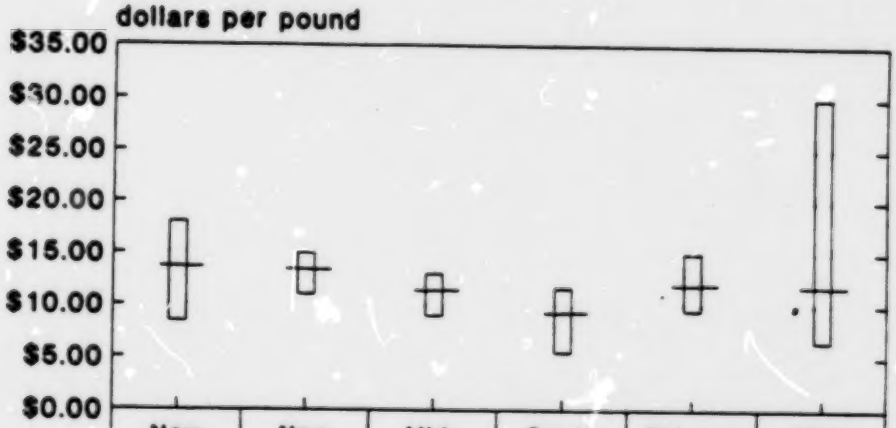
Smoked Salmon Wholesale Prices
By Market Segment



	Seafood retail	Gourmet stores	Restaurants	Overall
High	$15.00	$30.00	$16.30	$30.00
Low	$6.50	$10.75	$5.50	$5.50
Average	$10.99	$14.35	$11.56	$12.28
N	15	16	19	50

Exhibit 6.10

Smoked Salmon Wholesale Prices
by Region



	New England	New York	Mid-Atlantic	South	Chicago	West
High	$18.00	$15.00	$12.99	$11.60	$15.00	$30.00
Low	$8.45	$11.00	$9.00	$5.50	$9.50	$6.50
Average	$13.61	$13.38	$11.44	$9.30	$12.00	$11.77
N	12	7	4	3	4	20

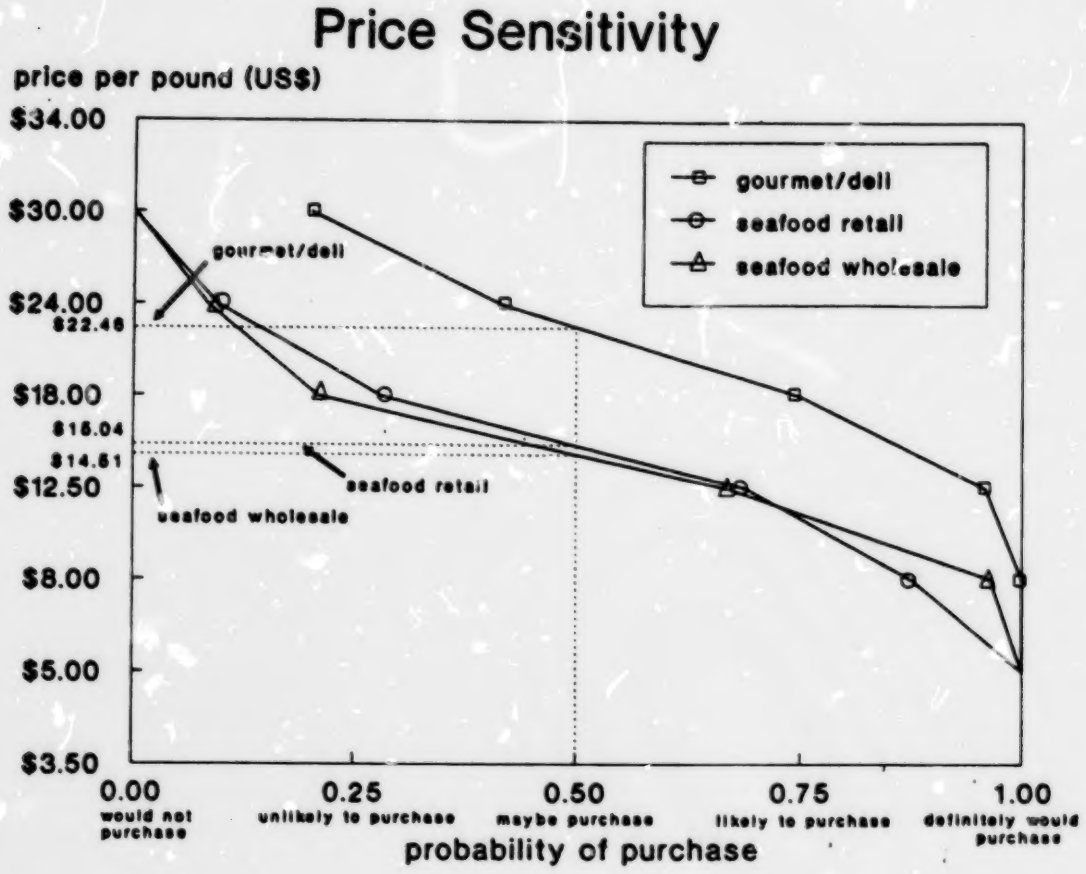
6.4. PRICE SENSITIVITY

As part of the personal interviews of smoked salmon buyers in the northeast U.S. conducted in March 1989, a series of questions were asked regarding the probability of purchasing smoked salmon at various price levels. For each price five choices were presented: would not purchase (probability of purchase (p) = 0.00), unlikely to purchase (p = 0.25), maybe purchase (p = 0.50), likely to purchase (p = 0.75) and definitely would purchase (p = 1.00). This information, when averaged over all respondents in a given market segment, can be used to construct a curve of the sensitivity of purchasing smoked salmon to price changes or the probability of purchasing smoked salmon at discrete price levels.

In particular, the price at which a market segment may or may not purchase smoked salmon (p = 0.50) will not only highlight the critical price which defines price ranges where buyers are likely or unlikely to purchase smoked salmon, but also will highlight differences in price sensitivity among the market sectors.

Exhibit 6.11 shows the price sensitivity curves for the gourmet/deli, seafood retail and seafood wholesale segments in the northeastern U.S. based on personal interviews with 28 smoked salmon buyers. For the seafood wholesale segment, a smoked salmon price of US$14.51 per pound was the critical price where at higher prices buyers in this segment would be unlikely to purchase smoked salmon, and at prices lower than this critical price, they would be inclined to purchase smoked salmon. For the seafood retail segment, the critical price was

Exhibit 6.11


Price Sensitivity
price per pound (US$)
$34.00
$30.00
$24.00
$22.46
$18.00
$16.04
$14.61
$12.50
$8.00
$5.00
$3.50
gourmet/deli
seafood retail
seafood wholesale
gourmet/deli
seafood retail
seafood wholesale
0.00
would not purchase
0.25
unlikely to purchase
0.50
maybe purchase
0.75
likely to purchase
1.00
definitely would purchase
probability of purchase

slightly higher at US$15.04 per pound, and for the gourmet/deli segment, the critical price was much higher at US$22.46 per pound.

In general, the gourmet/deli segment was less sensitive (more likely to purchase smoked salmon) to higher wholesale prices at any given price level than the seafood wholesale or the seafood retail segments. The price sensitivity curves for the two seafood segments were very similar and given the error associated with these average curves, the price sensitivities of these two sectors are, in practical terms, the same.

CHAPTER 7

SUMMARY AND CONCLUSIONS

7.1 SUMMARY

The results of this nationwide telephone survey of smoked salmon buyers and the results of a similar survey of smoked salmon buyers in the northeast U.S. provide an initial and comprehensive description of the market for smoked salmon. The objectives of this study were to describe the degree to which smoked salmon is present in the marketplace, to determine what types of smoked salmon products are currently being handled, to determine what the preferences are for certain smoked salmon characteristics and to describe sales trends, price levels and price sensitivity. The major findings of this study are summarized below:

1) Overall, 20 percent of firms responding carried smoked salmon, and most carried it in conjunction with other smoked seafood. Gourmet stores were most likely to carry smoked salmon while restaurants were least likely. New England, New York City and the West had the greatest presence of smoked salmon.

2) Sides of smoked salmon and pre-slicing were the predominant product form characteristics in all market segments and regions. Pre-sliced sides and uncut sides were the top two product forms overall.

3) Scottish style was the most common form of preparation carried by firms in the survey. Northwest style, hot-smoked, salmon was most common in the West region, while Scottish style was most common in the Eastern and Southern regions.

4) A vacuum pack was the dominant form of packaging among all market segments and regions surveyed.

5) Package weight patterns correlated closely with product form patterns. The most common package weight was one pound or more which corresponds to a side of smoked salmon. Of the smaller package weights, one quarter pound (4 oz. or 113 g.) was the most common.

6) Smoked salmon produced from Atlantic salmon was more prevalent than smoked products produced from Pacific salmon. Smoked Atlantic salmon was dominant in all market segments, and in all regions but the West and Chicago, where several species of Pacific salmon (including King, King or Sockeye, and unspecified Pacific salmon species) were as prevalent, or, in the case of the West, slightly more prevalent than Atlantic salmon.

7) Among the responding firms, there was more awareness of the region of origin of smoked salmon products carried than of their brand. Norway was the country of origin most often identified.

8) Smoked salmon was by far the best selling smoked seafood of all the types that firms carried. Scottish style was the best selling smoked salmon overall, but Northwest style was the best selling in seafood retail stores, and, among regions, in the West.

9) In general, the majority of firms expressed indifference toward farmed versus wild salmon for smoked salmon products. However, a majority of firms preferred Atlantic salmon over Pacific salmon.

10) Consistent with product forms, most firms surveyed preferred pre-sliced versus uncut, and a majority favored sides over portions.

11) On all market segments and all regions surveyed, a larger percentage of firms preferred Scottish style cold-smoked salmon to Northwest style hot-smoked salmon.

12) The majority of firms surveyed indicated that there was a peak sales season which generally occurred during the winter holidays or from Thanksgiving to New Year. Gourmet store sales were highly seasonal, while most restaurants surveyed indicated that their smoked salmon sales were not. Among the regions, most of the firms responding had seasonal sales with the exception of those surveyed in the South, where non-seasonality prevailed, and New England, where firms were equally divided among those which cited seasonality of sales and those which did not.

13) Average wholesale prices paid by firms ranged from US$9.30 per pound to US$14.35 per pound depending on region and market segment. The highest average wholesale price paid by firms was in the gourmet segment and in

New England and New York City. The lowest was in the seafood retail segment and in the South.

14) Based on a March 1989 survey of Northeast smoked salmon buyers, the gourmet/deli segment was less price sensitive than the seafood retail or wholesale segments. The gourmet/deli segment in that survey was more likely to purchase smoked salmon at higher prices than seafood wholesalers or retailers.

There are some limitations to the results of this study. Due to the constrained sample size, and to the fact that most respondents did not carry smoked salmon, for some aspects of the salmon market, the number of respondents may be small when responses are disaggregated by region (see appendices for response frequencies). Fine distinctions between regions or market segments based on small percentage differences are not warranted based on the data gathered by this study. As a broad, comprehensive, but initial, examination of the smoked salmon market in North America, this study describes the larger and more general aspects of the smoked salmon market.

7.2 IMPLICATIONS FOR CANADIAN PRODUCERS

Although smoked salmon sales volumes were generally found to be stable or increasing, the average sales growth rates, as the market currently exists, are moderate. Recent sales volume increases for smoked salmon were found to be 6 percent annually for seafood stores, 14 percent annually for gourmet stores and only 5 percent for restaurants. Sales also tend to be quite seasonal, concentrated around Christmas, with gourmet stores having the greatest average volume per outlet.

All things considered, one would expect that major expansion of smoked salmon production would not necessarily be highly profitable given current market conditions and practices. In addition to moderate growth of smoked salmon sales, three potentially significant factors which need consideration are:

1) Increased recognition of the potential health risks from smoked salmon associated with Clostridium botulinum and Listeria monocytogenes contamination. There have been several recalls recently which have damaged the market. Such incidences will be especially harmful if it happens to occur before a major selling season (Christmas). Canadian and U.S. regulatory agencies are working to find solutions to these issues.
2) There is general consumer uncertainty regarding the healthfulness of smoked products.

3) The declining health of the United States economy is a potential problem, especially for luxury products which most would consider smoked salmon to be.

In light of these concerns, the following are suggestions to improve the opportunities:

1) Observe strict quality control.
2) There is a need to de-seasonalize demand and to sell smoked salmon in market segments other than to the "cocktail party" set and for gourmet dining. This could be achieved through promotions and working with chefs to develop new products and uses. Using smoked salmon in pastas, salads, with eggs, and more frequently as a lunch item, are critical to de-seasonalizing consumption and developing markets other than high-end dining. The market must be broadened.
3) Ethnic markets need further consideration and possible targeting.
4) Seafood retail and restaurants are more sensitive to price than gourmet stores. Therefore, the development of products to segment the market, especially lower priced products for seafood retail, could significantly expand sales.

GLOSSARY

Cold-Smoked: Cold-smoked salmon refers to a type of smoked salmon which is first salted or brined and then slowly dried in a cold-smoking process. Cold-smoked salmon is smoked at temperatures below 80 degrees farenheit and does not cook the flesh. The resulting products is moist and easily sliced. Cold-smoked salmons include Scotch smoked salmon, Irish smoked salmon, and Nova.

Hot-Smoked: Hot-smoked salmon is salmon which is first cured in a salt brine and then subjected to a hot smoking process which raises the internal temperature of the flesh to above 150 degrees farenheit, essentially cooking the fish. The end product is more difficult to slice and is usually sold in sides and portions.

Scottish Style: Scottish style smoked salmon refers to a premium, European style of cold smoked salmon such as Irish or Scottish smoked salmon. Scottish style smoked salmon is usually produced with Atlantic salmon, and, for the purposes of this report, refers to a premium cold-smoked salmon.

Northwest Style: Northwest style smoked salmon refers to a hot-smoked salmon which is usually produced from Pacific species of salmon.

Lox: Lox is a very mild-cured smoked salmon known for its low salt content and the use of sugar in the brine. Most lox is produced by brine curing only, although a small amount of lox is cold-smoked after the brining process. Lox is primarily a kosher product having its major markets in cities with large Jewish population where it is served with bagels and cream cheese.

Nova: Nova is a cold-smoked salmon usually produced with pacific salmon although there are premium Nova products made with Atlantic salmon. Nova is often found in delicatessens and much of it is produced in New York. Much of the nova smoked salmon is kosher having major markets in cities with large Jewish populations.

Cajun Style: Cajun style smoked salmon is a relatively new hot-smoked salmon product distinguished by the addition of cajun spices such as cayenne and white pepper.

Gravlax: Gravlax is a cured product made by marinating salmon in salt, sugar and dill. It is not smoked.

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APPENDIX A

SURVEY STATISTICS - MARKET SEGMENTS

Overall Results

Sample size	691		
# Respondents	415		
% Response	60%	# Responses	
No. of respondents who carry smoked seafood:		93	22.4%
No. of respondents who carry smoked salmon: (*)		81	19.5%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		322	77.6%
Average no. of smoked seafood species carried (including smoked salmon):		2.9	(n=85)
Average no. of smoked salmon products carried:		1.8	(n=79)

Smoked salmon product frequency

# products	# firms	%
1	43	54%
2	19	24%
3	9	11%
4	8	10%
>4	0	0%
Total Responses	79	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note : Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	3	4%
uncut portions	3	4%
uncut sides	26	35%
presliced portions	10	13%
presliced sides	44	59%
presliced (unspecified)	8	11%
pate.	0	0%
sides only	53	71%
sides and portions	9	12%
portions only	3	4%
presliced sides only	29	39%
Total Responses	75	

Preparation	# Firms Carrying	%
lox	14	19%
nova	14	19%
Scottish style	51	68%
Northwest style	14	19%
peppered	0	0%
cajun	2	3%
graviax	1	1%
other	5	7%
lox only	7	9%
nova only	5	7%
Scottish style only	38	51%
Northwest style only	5	7%
Total Responses	75	

Packaging	# Firms Carrying	%
cryovac	57	90%
foil	1	2%
loose	10	16%
cryovac only	53	84%
Total Responses	63	

Package Weight	# Firms Carrying	%
4 oz	11	19%
8 oz	5	9%
1 lb +	55	96%
1 lb + only	44	77%
Total Responses	57	

Species	# Firms Carrying	%
Sockeye	2	3%
King	7	11%
King or Sockeye	3	5%
Pacific (**)	16	25%
Atlantic	48	75%
Pacific species only	16	25%
Atlantic only	39	61%
Atlantic & Pacific species	9	14%
Total Responses	64	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	20	33%
wild	18	30%
indifferent	22	37%
Atlantic	33	58%
Pacific	13	23%
indifferent	11	19%
pre-sliced	31	53%
uncut	25	42%
indifferent	3	5%

Preferences	# responses	%
portions	9	16%
sides	43	74%
indifferent	6	10%
Scottish style	42	79%
Northwest style	10	19%
indifferent	1	2%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	46	79%
trout	2	3%
whitefish	2	3%
herring	0	0%
mackerel	1	2%
eel	0	0%
bluefish	2	3%
cod / haddock	1	2%
tuna	0	0%
mussels	0	0%
scallops	1	2%
oysters	0	0%
other	3	5%
Total Responses	58	

Best selling smoked salmon	# responses	%
lox	6	15%
nova	5	13%
Scottish style	19	48%
Northwest style	9	23%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	1	3%
Total Responses	40	

Smoked Salmon Sales (Cont.)

Sales Trend – Smoked Fish	# responses	%
Increasing	12	26%
Decreasing	3	7%
Stable	31	67%
Total Responses	46	
Avg. % change	+8.8 %	

Sales Trend – Smoked Salmon	# responses	%
Increasing	20	32%
Decreasing	3	5%
Stable	39	63%
Total Responses	62	
Avg. % change	+7.7 %	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	25	38%
Yes	40	62%
Total Responses	65	

Peak Season for Smoked Salmon	# responses	%
spring	1	3%
summer	3	8%
Thanksgiving	0	0%
Christmas/New Year	24	63%
Easter	0	0%
other	2	5%
more than one season (*)	8	21%
Total Responses	38	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	323.1
Minimum	2.5
Maximum	4000.0
Std Deviation	770.9
Total Responses	32

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	128.4
Minimum	1.0
Maximum	1500.0
Std Deviation	322.1
Total Responses	30

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)	
Average	44.5
Minimum	0.5
Maximum	750.0
Std Deviation	142.0
Total Responses	26

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$12.28
Minimum	$5.50
Maximum	$30.00
Std Deviation	$3.72
Total Responses	50

(*) - generally Thanksgiving and Christmas/New Year

Retail Stores

Sample size	155		
# Respondents	87		
% Response	56%	# Responses	
No. of respondents who carry smoked seafood:		27	31.0%
No. of respondents who carry smoked salmon (*)		23	26.4%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		60	69.0%
Average no. of smoked seafood species carried (including smoked salmon):		2.8	(n= 26)
Average no. of smoked salmon products carried:		2.1	(n= 23)

Smoked salmon product frequency

# products	# firms	%
1	10	43%
2	6	26%
3	2	9%
4	5	22%
>4	0	0%
Total Responses	23	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	1	5%
uncut portions	2	10%
uncut sides	11	52%
presliced portions	2	10%
presliced sides	11	52%
presliced (unspecified)	3	14%
pate	0	0%
sides only	15	71%
sides and portions	3	14%
portions only	0	0%
presliced sides only	5	24%
Total Responses	21	

Preparation	# Firms Carrying	%
lox	7	33%
nova	5	24%
Scottish style	13	62%
Northwest style	9	43%
peppered	0	0%
cajun	2	10%
gravlax	0	0%
other	2	10%
lox only	0	0%
nova only	1	5%
Scottish style only	8	38%
Northwest style only	2	10%
Total Responses	21	

Packaging	# Firms Carrying	%
cryovac	15	88%
foil	1	6%
loose	3	18%
cryovac only	14	82%
Total Responses	17	

Package Weight	# Firms Carrying	%
4 oz	3	19%
8 oz	2	13%
1 lb +	16	100%
1 lb + only	12	75%
Total Responses	16	

Species	# Firms Carrying	%
Sockeye	1	5%
King	6	32%
King or Sockeye	0	0%
Pacific (**)	8	42%
Atlantic	12	63%
Pacific species only	7	37%
Atlantic only	7	37%
Atlantic & Pacific species	5	26%
Total Responses	19	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	8	53%
wild	3	20%
indifferent	4	27%
Atlantic	8	62%
Pacific	2	15%
indifferent	3	23%
pre-sliced	7	58%
uncut	4	33%
indifferent	1	8%

Preferences	# responses	%
portions	3	25%
sides	6	50%
indifferent	3	25%
Scottish style	7	70%
Northwest style	3	30%
indifferent	0	0%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	10	59%
trout	0	0%
whitefish	1	6%
herring	0	0%
mackerel	1	6%
eel	0	0%
bluefish	2	12%
cod / haddock	1	6%
tuna	0	0%
mussels	0	0%
scallops	0	0%
oysters	0	0%
other	2	12%
Total Responses	17	

Best selling smoked salmon	# responses	%
lox	0	0%
nova	0	0%
Scottish style	3	38%
Northwest style	5	63%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	0	0%
Total Responses	8	

Smoked Salmon Sales (Cont.)

Sales Trend - Smoked Fish	# responses	%
Increasing	5	56%
Decreasing	1	11%
Stable	3	33%
Total Responses	9	
Avg. % change	+15.8%	

Sales Trend - Smoked Salmon	# responses	%
Increasing	7	44%
Decreasing	1	6%
Stable	8	50%
Total Responses	16	
Avg. % change	+5.7%	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	7	35%
Yes	13	65%
Total Responses	20	

Peak Season for Smoked Salmon	# responses	%
spring	0	0%
summer	1	8%
Thanksgiving	0	0%
Christmas/New Year	8	67%
Easter	0	0%
other	0	0%
more than one season (*)	3	25%
Total Responses	12	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	353.0
Minimum	8.0
Maximum	2000.0
Std Deviation	586.0
Total Responses	10

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	141.0
Minimum	3.0
Maximum	1000.0
Std Deviation	306.0
Total Responses	9

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)	
Average	32.0
Minimum	3.0
Maximum	50.0
Std Deviation	17.0
Total Responses	8

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$10.99
Minimum	$6.50
Maximum	$15.00
Std Deviation	$2.53
Total Responses	15

(*) - generally Thanksgiving and Christmas / New Year

Socio-Demographic Characteristics (*)

Income Level of Customers	# responses	%
high	4	11%
high-medium	1	3%
medium	15	41%
medium-low	1	3%
low	6	16%
variable	10	27%
Total Responses	37	

No. of Customers/day	
Average	407
Minimum	20
Maximum	4000
Std Deviation	810
Total Responses	26

Race/Ethnic Group	# responses	%
Black	6	21%
Hispanic	2	7%
Oriental	2	7%
Jewish	2	7%
Variable	16	57%
Total Responses	28	

Annual Sales of Firm	# responses	%
< $100,000	2	13%
< $250,000	2	13%
< $750,000	6	40%
< $1,500,000	2	13%
> $1,500,000	3	20%
Total Responses	15	

(*) - Of all respondents (including those who did not carry smoked seafood).

Gourmet Stores

Sample size	102		
# Respondents	45		
% Response	44%		
		# Responses	
No. of respondents who carry smoked seafood:		29	64.4%
No. of respondents who carry smoked salmon: (*)		25	86.6%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		16	35.6%
Average no. of smoked seafood species carried (including smoked salmon):		3.8	(n= 24)
Average no. of smoked salmon products carried:		2.1	(n= 24)

Smoked salmon product frequency

# products	# firms	%
1	10	42%
2	5	21%
3	6	25%
4	3	13%
>4	0	0%
Total Responses	24	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	0	0%
uncut portions	1	4%
uncut sides	7	30%
presliced portions	3	13%
presliced sides	14	61%
presliced (unspecified)	2	9%
pate	0	0%
sides only	17	74%
sides and portions	3	13%
portions only	1	4%
presliced sides only	11	48%
Total Responses	23	

Preparation	# Firms Carrying	%
lox	2	8%
nova	6	25%
Scottish style	15	63%
Northwest style	3	13%
peppered	0	0%
cajun	0	0%
gravlax	0	0%
other	2	8%
lox only	2	8%
nova only	3	13%
Scottish style only	12	50%
Northwest style only	2	8%
Total Responses	24	

Packaging	# Firms Carrying	%
cryovac	20	91%
foil	0	0%
loose	4	18%
cryovac only	18	82%
Total Responses	22	

Package Weight	# Firms Carrying	%
4 oz	6	27%
8 oz	2	9%
1 lb +	21	95%
1 lb + only	16	73%
Total Responses	22	

Species	# Firms Carrying	%
Sockeye	1	4%
King	1	4%
King or Sockeye	0	0%
Pacific (**)	5	22%
Atlantic	19	83%
Pacific species only	4	17%
Atlantic only	16	70%
Atlantic & Pacific species	3	13%
Total Responses	23	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	3	16%
wild	8	42%
indifferent	8	42%
Atlantic	12	57%
Pacific	5	24%
indifferent	4	19%
pre-sliced	11	50%
uncut	11	50%
indifferent	0	0%

Preferences	# responses	%
portions	3	15%
sides	16	80%
indifferent	1	5%
Scottish style	16	80%
Northwest style	4	20%
indifferent	0	0%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	19	100%
trout	0	0%
whitefish	0	0%
herring	0	0%
mackerel	0	0%
eel	0	0%
bluefish	0	0%
cod / haddock	0	0%
tuna	0	0%
mussels	0	0%
scallops	0	0%
oysters	0	0%
other	0	0%
Total Responses	19	

Best selling smoked salmon	# responses	%
lox	2	12%
nova	4	24%
Scottish style	7	41%
Northwest style	3	18%
pepperod	0	0%
Cajun	0	0%
gravlax	0	0%
other	1	6%
Total Responses	17	

Smoked Salmon Sales (Cont.)

Sales Trend – Smoked Fish	# responses	%
Increasing	6	33%
Decreasing	1	6%
Stable	11	61%
Total Responses	18	
Avg. % change	+11.5 %	

Sales Trend – Smoked Salmon	# responses	%
Increasing	7	39%
Decreasing	1	6%
Stable	10	56%
Total Responses	18	
Avg. % change	+14.4 %	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	2	10%
Yes	18	90%
Total Responses	20	

Peak Season for Smoked Salmon	# responses	%
spring	0	0%
summer	0	0%
Thanksgiving	0	0%
Christmas/New Year	14	78%
Easter	0	0%
other	0	0%
more than one season (*)	4	22%
Total Responses	18	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	481.0
Minimum	3.0
Maximum	4000.0
Std Deviation	1015.0
Total Responses	14

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	182.0
Minimum	1.0
Maximum	1500.0
Std Deviation	389.0
Total Responses	14

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)
(insufficient sample size)

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$14.35
Minimum	$10.75
Maximum	$30.00
Std Deviation	$4.42
Total Responses	16

(*) - generally Thanksgiving and Christmas/New Year

Socio-Demographic Characteristics (*)

Income Level of Customers	# responses	%
high	13	45%
high-medium	7	24%
medium	7	24%
medium-low	0	0%
low	0	0%
variable	2	7%
Total Responses	29	

No. of Customers/day	
Average	387
Minimum	15
Maximum	1500
Std Deviation	440
Total Responses	20

Race/Ethnic Group	# responses	%
Black	0	0%
Hispanic	0	0%
Oriental	1	4%
Jewish	2	7%
Variable	24	89%
Total Responses	27	

Annual Sales of Firm	# responses	%
< $100,000	3	14%
< $250,000	3	14%
< $750,000	7	33%
< $1,500,000	5	24%
> $1,500,000	3	14%
Total Responses	21	

(*) - Of all respondents including those who did not carry smoked seafood

Restaurants

Sample size	434		
# Respondents	283		
% Response	65%		
		# Response	
No. of respondents who carry smoked seafood:		37	13.1%
No. of respondents who carry smoked salmon: (*)		33	11.7%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		246	86.9%
Average no. of smoked seafood species carried (including smoked salmon):		2.4	(n= 35)
Average no. of smoked salmon products carried:		1.3	(n= 32)

Smoked salmon product frequency

# products	# firms	%
1	23	72%
2	8	25%
3	1	3%
4	0	0%
>4	0	0%
Total Responses	32	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	2	7%
uncut portions	0	0%
uncut sides	8	26%
presliced portions	5	16%
presliced sides	19	61%
presliced (unspecified)	3	10%
pate	0	0%
sides only	21	68%
sides and portions	3	10%
portions only	2	6%
presliced sides only	13	42%
Total Responses	31	

Preparation	# Firms Carrying	%
lox	5	17%
nova	3	10%
Scottish style	23	77%
Northwest style	2	7%
peppered	0	0%
cajun	0	0%
gravlax	1	3%
other	1	3%
lox only	5	17%
nova only	1	3%
Scottish style only	18	60%
Northwest style only	1	3%
Total Responses	30	

Packaging	# Firms Carrying	%
cryovac	22	92%
foil	0	0%
loose	3	13%
cryovac only	21	88%
Total Responses	24	

Package Weight	# Firms Carrying	%
4 oz	2	11%
8 oz	1	5%
1 lb +	18	95%
1 lb + only	16	84%
Total Responses	19	

Species	# Firms Carrying	%
Sockeye	0	0%
King	0	0%
King or Sockeye	3	14%
Pacific (**)	3	14%
Atlantic	17	77%
Pacific species only	5	23%
Atlantic only	16	73%
Atlantic & Pacific species	1	5%
Total Responses	22	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	9	35%
wild	7	27%
indifferent	10	38%
Atlantic	13	57%
Pacific	6	26%
indifferent	4	17%
pre-sliced	13	52%
uncut	10	40%
indifferent	2	8%

Preferences	# responses	%
portions	3	12%
sides	21	81%
indifferent	2	8%
Scottish style	19	83%
Northwest style	3	13%
indifferent	1	4%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	17	77%
trout	2	9%
whitefish	1	5%
herring	0	0%
mackerel	0	0%
eel	0	0%
bluefish	0	0%
cod / haddock	0	0%
tuna	0	0%
mussels	0	0%
scallops	1	5%
oysters	0	0%
other	1	5%
Total Responses	22	

Best selling smoked salmon	# responses	%
lox	4	27%
nova	1	7%
Scottish style	9	60%
Northwest style	1	7%
peppered	0	0%
Cajun	0	0%
graviax	0	0%
other	0	0%
Total Responses	15	

Smoked Salmon Sales (Cont.)

Sales Trend – Smoked Fish	# responses	%
Increasing	1	5%
Decreasing	1	5%
Stable	17	89%
Total Responses	19	
Avg. % change	+3.0%	

Sales Trend – Smoked Salmon	# responses	%
Increasing	6	21%
Decreasing	1	4%
Stable	21	75%
Total Responses	28	
Avg. % change	+4.5%	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	16	64%
Yes	9	36%
Total Responses	25	

Peak Season for Smoked Salmon	# responses	%
spring	1	13%
summer	2	25%
Thanksgiving	0	0%
Christmas/New Year	2	25%
Easter	0	0%
other	2	25%
more than one season (*)	1	13%
Total Responses	8	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	9.3
Minimum	2.5
Maximum	17.5
Std Deviation	4.4
Total Responses	8

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	4.9
Minimum	2.0
Maximum	9.0
Std Deviation	2.7
Total Responses	7

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)	
Average	9.3
Minimum	0.5
Maximum	35.0
Std Deviation	9.5
Total Responses	16

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$11.56
Minimum	$5.50
Maximum	$16.30
Std Deviation	$3.09
Total Responses	19

(*) - generally Thanksgiving and Christmas/New Year

Socio-Demographic Characteristics (*)

Entree Price Range	$	N
Lunch (Average Low)	$6.88	73
Lunch (Average High)	$10.95	70
Dinner (Average Low)	$10.48	74
Dinner (Average High)	$17.21	70

No. Customers/Covers Per Day/Meal		N
Lunch (Average No.)	327	52
Dinner (Average No.)	164	28

Restaurant Capacity		N
Avg No. Customers	180	79

Restaurant Type	# Responses	%
Deli/Take Out	24	9%
Fast Food	36	13%
Ethnic	122	45%
White Tablecloth	32	12%
Family Style	33	12%
Cafe	22	8%
Bar/Pub	1	<1%
Total Responses		270

N indicates number of responses

(*) - Of all respondents (including those who did not carry smoked seafood).

APPENDIX B

SURVEY STATISTICS - REGIONS

New England

Sample size	97		
# Respondents	68		
% Response	70%	# Responses	
No. of respondents who carry smoked seafood:		20	*29.4%*
No. of respondents who carry smoked salmon: (*)		18	*26.5%*
No. of respondents who do NOT carry smoked seafood or smoked salmon:		48	*70.6%*
Average no. of smoked seafood species carried (including smoked salmon):		3.6	*(n= 20)*
Average no. of smoked salmon products carried:		1.6	*(n= 18)*

Smoked salmon product frequency

# products	# firms	%
1	12	*67%*
2	3	*17%*
3	1	*6%*
4	2	*11%*
>4	0	*0%*
Total Responses	*18*	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	1	6%
uncut portions	0	0%
uncut sides	5	28%
presliced portions	2	11%
presliced sides	12	67%
presliced (unspecified)	1	6%
pate	0	0%
sides only	14	78%
sides and portions	2	11%
portions only	0	0%
presliced sides only	9	50%
Total Responses	18	

Preparation	# Firms Carrying	%
lox	1	6%
nova	4	24%
Scottish style	15	88%
Northwest style	1	6%
peppered	0	0%
cajun	0	0%
gravlax	0	0%
other	1	6%
lox only	0	0%
nova only	2	12%
Scottish style only	12	71%
Northwest style only	0	0%
Total Responses	17	

Packaging	# Firms Carrying	%
cryovac	14	93%
foil	0	0%
loose	1	7%
cryovac only	14	93%
Total Responses	15	

Package Weight	# Firms Carrying	%
4 oz	2	15%
8 oz	0	0%
1 lb +	13	100%
1 lb + only	11	85%
Total Responses	13	

Species	# Firms Carrying	%
Sockeye	0	0%
King	0	0%
King or Sockeye	0	0%
Pacific (**)	2	13%
Atlantic	15	94%
Pacific species only	1	6%
Atlantic only	14	88%
Atlantic & Pacific species	1	6%
Total Responses	16	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	8	50%
wild	0	0%
indifferent	8	50%
Atlantic	9	75%
Pacific	0	0%
indifferent	3	25%
pre-sliced	8	67%
uncut	3	25%
indifferent	1	8%

Preferences	# responses	%
portions	1	9%
sides	9	82%
indifferent	1	9%
Scottish style	9	90%
Northwest style	1	10%
indifferent	0	0%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	8	62%
trout	0	0%
whitefish	0	0%
herring	0	0%
mackerel	1	8%
eel	0	0%
bluefish	2	15%
cod / haddock	1	8%
tuna	0	0%
mussels	0	0%
scallops	0	0%
oysters	0	0%
other	1	8%
Total Responses	13	

Best selling smoked salmon	# responses	%
lox	0	0%
nova	1	17%
Scottish style	5	83%
Northwest style	0	0%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	0	0%
Total Responses	6	

Smoked Salmon Sales (Cont.)

Sales Trend – Smoked Fish	# responses	%
Increase	4	40%
Decrease	1	10%
Stable	5	50%
Total Responses	10	
Avg. % change	+17.0%	

Sales Trend – Smoked Salmon	# responses	%
Increasing	5	33%
Decreasing	2	13%
Stable	8	53%
Total Responses	15	
Avg. % change	+9.5%	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	7	50%
Yes	7	50%
Total Responses	14	

Peak Season for Smoked Salmon	# responses	%
spring	1	14%
summer	1	14%
Thanksgiving	0	0%
Christmas/New Year	5	71%
Easter	0	0%
other	0	0%
more than one season (*)	0	0%
Total Responses	7	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	83.1
Minimum	7.0
Maximum	250.0
Std Deviation	84.1
Total Responses	7

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	15.7
Minimum	3.0
Maximum	50.0
Std Deviation	15.8
Total Responses	8

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)	
Average	19.8
Minimum	1.0
Maximum	50.0
Std Deviation	20.4
Total Responses	8

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$13.61
Minimum	$8.45
Maximum	$18.00
Std Deviation	$2.27
Total Responses	12

(*) - generally Thanksgiving and Christmas/New Year

New York City

Sample size	109	
# Respondents	64	
% Response	59%	

	# Responses	
No. of respondents who carry smoked seafood:	18	*28.1%*
No. of respondents who carry smoked salmon: (*)	15	*23.4%*
No. of respondents who do NOT carry smoked seafood or smoked salmon:	46	*71.9%*
Average no. of smoked seafood species carried (including smoked salmon):	3.0	*(n= 14)*
Average no. of smoked salmon products carried:	1.5	*(n= 15)*

Smoked salmon product frequency

# products	# firms	%
1	11	*73%*
2	1	*7%*
3	2	*13%*
4	1	*7%*
>4	0	*0%*
Total Responses	*15*	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	1	8%
uncut portions	0	0%
uncut sides	7	54%
presliced portions	0	0%
presliced sides	5	39%
presliced (unspecified)	1	8%
pate	0	0%
sides only	11	85%
sides and portions	0	0%
portions only	0	0%
presliced sides only	4	31%
Total Responses	13	

Preparation	# Firms Carrying	%
lox	1	7%
nova	3	20%
Scottish style	13	87%
Northwest style	0	0%
peppered	0	0%
cajun	0	0%
gravlax	0	0%
other	0	0%
lox only	1	7%
nova only	1	7%
Scottish style only	11	73%
Northwest style only	0	0%
Total Responses	15	

Packaging	# Firms Carrying	%
cryovac	10	83%
foil	0	0%
loose	4	33%
cryovac only	8	67%
Total Responses	12	

Package Weight	# Firms Carrying	%
4 oz	0	0%
8 oz	0	0%
1 lb +	12	100%
1 lb + only	12	100%
Total Responses	12	

Species	# Firms Carrying	%
Sockeye	1	10%
King	0	0%
King or Sockeye	0	0%
Pacific (**)	1	10%
Atlantic	10	100%
Pacific species only	0	0%
Atlantic only	8	80%
Atlantic & Pacific species	2	20%
Total Responses	10	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	4	33%
wild	5	42%
indifferent	3	25%
Atlantic	7	64%
Pacific	2	18%
indifferent	2	18%
pre-sliced	3	27%
uncut	8	73%
indifferent	0	0%

Preferences	# responses	%
portions	2	18%
sides	8	73%
indifferent	1	9%
Scottish style	10	100%
Northwest style	0	0%
indifferent	0	0%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	8	80%
trout	1	10%
whitefish	0	0%
herring	0	0%
mackerel	0	0%
eel	0	0%
bluefish	0	0%
cod / haddock	0	0%
tuna	0	0%
mussels	0	0%
scallops	1	10%
oysters	0	0%
other	0	0%
Total Responses	10	

Best selling smoked salmon	# responses	%
lox	0	0%
nova	2	33%
Scottish style	4	67%
Northwest style	0	0%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	0	0%
Total Responses	6	

Smoked Salmon Sales (Cont.)

Sales Trend – Smoked Fish	# responses	%
Increasing	2	20%
Decreasing	1	10%
Stable	7	70%
Total Responses	10	
Avg. % change	+1.3%	

Sales Trend – Smoked Salmon	# responses	%
Increasing	3	27%
Decreasing	0	0%
Stable	8	73%
Total Responses	11	
Avg. % change	+5.0%	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	1	10%
Yes	9	90%
Total Responses	10	

Peak Season for Smoked Salmon	# responses	%
spring	0	0%
summer	1	11%
Thanksgiving	0	0%
Christmas/New Year	6	67%
Easter	0	0%
other	0	0%
more than one season (*)	2	22%
Total Responses	9	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	217.3
Minimum	2.5
Maximum	1100.0
Std Deviation	348.7
Total Responses	9

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	104.9
Minimum	1.0
Maximum	500.0
Std Deviation	160.5
Total Responses	9

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)
(insufficient sample size)

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$13.36
Minimum	$11.00
Maximum	$15.00
Std Deviation	$1.41
Total Responses	7

(*) - generally Thanksgiving and Christmas/New Year

Mid-Atlantic

Sample size	88		
# Respondents	52		
% Response	59%	# Responses	
No. of respondents who carry smoked seafood:		9	17.3%
No. of respondents who carry smoked salmon: (*)		5	9.6%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		43	82.7%
Average no. of smoked seafood species carried (including smoked salmon):		3.3	(n= 9)
Average no. of smoked salmon products carried:		2.2	(n= 5)

Smoked salmon product frequency

# products	# firms	%
1	1	20%
2	3	60%
3	0	0%
4	1	20%
>4	0	0%
Total Responses	5	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	0	0%
uncut portions	0	0%
uncut sides	0	0%
presliced portions	2	40%
presliced sides	4	80%
presliced (unspecified)	1	20%
pate	0	0%
sides only	2	40%
sides and portions	2	40%
portions only	0	0%
presliced sides only	2	40%
Total Responses	5	

Preparation	# Firms Carrying	%
lox	1	25%
nova	1	25%
Scottish style	1	25%
Northwest style	0	0%
peppered	0	0%
cajun	0	0%
gravlax	0	0%
other	2	50%
lox only	1	25%
nova only	0	0%
Scottish style only	1	25%
Northwest style only	0	0%
Total Responses	4	

Packaging	# Firms Carrying	%
cryovac	5	100%
foil	0	0%
loose	2	40%
cryovac only	3	60%
Total Responses	5	

Package Weight	# Firms Carrying	%
4 oz	2	40%
8 oz	1	20%
1 lb +	5	100%
1 lb + only	2	40%
Total Responses	5	

Species	# Firms Carrying	%
Sockeye	0	0%
King	1	33%
King or Sockeye	0	0%
Pacific (**)	0	0%
Atlantic	3	100%
Pacific species only	0	0%
Atlantic only	2	67%
Atlantic & Pacific species	1	33%
Total Responses	3	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	0	0%
wild	1	33%
indifferent	2	67%
Atlantic	2	50%
Pacific	1	25%
indifferent	1	25%
pre-sliced	1	25%
uncut	2	50%
indifferent	1	25%

Preferences	# responses	%
portions	1	25%
sides	3	75%
indifferent	0	0%
Scottish style	2	50%
Northwest style	1	25%
indifferent	1	25%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	4	100%
trout	0	0%
whitefish	0	0%
herring	0	0%
mackerel	0	0%
eel	0	0%
bluefish	0	0%
cod / haddock	0	0%
tuna	0	0%
mussels	0	0%
scallops	0	0%
oysters	0	0%
other	0	0%
Total Responses	4	

Best selling smoked salmon	# responses	%
lox	1	25%
nova	1	25%
Scottish style	1	25%
Northwest style	0	0%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	1	25%
Total Responses	4	

Smoked Salmon Sales (Cont.)

Sales Trend – Smoked Fish	# responses	%
Increasing	0	0%
Decreasing	0	0%
Stable	4	100%
Total Responses	4	
Avg. % change	+0%	

Sales Trend – Smoked Salmon	# responses	%
Increasing	1	25%
Decreasing	0	0%
Stable	3	75%
Total Responses	4	
Avg. % change	+5.0%	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	2	40%
Yes	3	60%
Total Responses	5	

Peak Season for Smoked Salmon	# responses	%
spring	0	0%
summer	0	0%
Thanksgiving	0	0%
Christmas/New Year	3	100%
Easter	0	0%
other	0	0%
more than one season (*)	0	0%
Total Responses	3	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	148.3
Minimum	20.0
Maximum	225.0
Std Deviation	91.9
Total Responses	3

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	33.3
Minimum	8.0
Maximum	80.0
Std Deviation	33.2
Total Responses	3

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)
(insufficient sample size)

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$11.44
Minimum	$9.00
Maximum	$12.99
Std Deviation	$1.48
Total Responses	4

(*) - generally Thanksgiving and Christmas/New Year

South

Sample size	99		
# Respondents	51		
% Response	52%	# Responses	
No. of respondents who carry smoked seafood:		9	17.6%
No. of respondents who carry smoked salmon: (*)		8	15.7%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		42	82.4%
Average no. of smoked seafood species carried (including smoked salmon):		3.7	(n= 7)
Average no. of smoked salmon products carried:		1.6	(n= 8)

Smoked salmon product frequency

# products	# firms	%
1	4	50%
2	3	38%
3	1	13%
4	0	0%
>4	0	0%
Total Responses	8	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	1	14%
uncut portions	0	0%
uncut sides	2	29%
presliced portions	1	14%
presliced sides	5	71%
presliced (unspecified)	0	0%
pate	0	0%
sides only	5	71%
sides and portions	1	14%
portions only	0	0%
presliced sides only	3	43%
Total Responses	7	

Preparation	# Firms Carrying	%
lox	0	0%
nova	1	13%
Scottish style	7	88%
Northwest style	1	13%
peppered	0	0%
cajun	0	0%
gravlax	0	0%
other	0	0%
lox only	0	0%
nova only	1	13%
Scottish style only	6	75%
Northwest style only	0	0%
Total Responses	8	

Packaging	# Firms Carrying	%
cryovac	4	80%
foil	0	0%
loose	1	20%
cryovac only	4	80%
Total Responses	5	

Package Weight	# Firms Carrying	%
4 oz	1	33%
8 oz	0	0%
1 lb +	3	100%
1 lb + only	2	67%
Total Responses	3	

Species	# Firms Carrying	%
Sockeye	0	0%
King	0	0%
King or Sockeye	0	0%
Pacific (**)	1	17%
Atlantic	5	83%
Pacific species only	1	17%
Atlantic only	5	83%
Atlantic & Pacific species	0	0%
Total Responses	6	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	1	20%
wild	2	40%
indifferent	2	40%
Atlantic	2	40%
Pacific	1	20%
indifferent	2	40%
pre-sliced	2	40%
uncut	3	60%
indifferent	0	0%

Preferences	# responses	%
portions	0	0%
sides	5	100%
indifferent	0	0%
Scottish style	5	100%
Northwest style	0	0%
indifferent	0	0%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	2	67%
trout	0	0%
whitefish	0	0%
herring	0	0%
mackerel	0	0%
eel	0	0%
bluefish	0	0%
cod / haddock	0	0%
tuna	0	0%
mussels	0	0%
scallops	0	0%
oysters	0	0%
other	1	33%
Total Responses	3	

Best selling smoked salmon	# responses	%
lox	0	0%
nova	0	0%
Scottish style	2	100%
Northwest style	0	0%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	0	0%
Total Responses	2	

Smoked Salmon Sales (Cont.)

Sales Trend - Smoked Fish	# responses	%
Increasing	1	20%
Decreasing	1	20%
Stable	3	60%
Total Responses	5	
Avg. % change	+2.0%	

Sales of Smoked Salmon During Peak Season (lbs/week)
(insufficient sample size)

Sales Trend - Smoked Salmon	# responses	%
Increasing	1	20%
Decreasing	1	20%
Stable	3	60%
Total Responses	5	
Avg. % change	+1.0%	

Sales of Smoked Salmon During Rest of the Year (lbs/week)
(insufficient sample size)

Is There a Peak Season for Smoked Salmon?	# responses	%
No	4	80%
Yes	1	20%
Total Responses	5	

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)	
Average	201.0
Minimum	9.0
Maximum	750.0
Std Deviation	317.0
Total Responses	4

Peak Season for Smoked Salmon	# responses	%
(insufficient sample size)		

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$9.30
Minimum	$5.50
Maximum	$11.60
Std Deviation	$2.71
Total Responses	3

(*) - generally Thanksgiving and Christmas/New Year

Chicago

Sample size	101		
# Respondents	56		
% Response	55%	# Respons	%
No. of respondents who carry smoked seafood:		8	14.3%
No. of respondents who carry smoked salmon: (*)		8	14.3%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		48	85.7%
Average no. of smoked seafood species carried (including smoked salmon):		2.0	(n= 8)
Average no. of smoked salmon products carried:		1.6	(n= 7)

Smoked salmon product frequency

# products	# firms	%
1	5	71%
2	1	14%
3	0	0%
4	1	14%
>4	0	0%
Total Responses	7	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	0	0%
uncut portions	1	14%
uncut sides	4	57%
presliced portions	2	29%
presliced sides	2	29%
presliced (unspecified)	1	14%
pate	0	0%
sides only	5	71%
sides and portions	1	14%
portions only	1	14%
presliced sides only	1	14%
Total Responses	7	

Preparation	# Firms Carrying	%
lox	1	17%
nova	1	17%
Scottish style	4	67%
Northwest style	2	33%
peppered	0	0%
cajun	0	0%
gravlax	0	0%
other	0	0%
lox only	0	0%
nova only	1	17%
Scottish style only	3	50%
Northwest style only	1	17%
Total Responses	6	

Packaging	# Firms Carrying	%
cryovac	5	100%
foil	0	0%
loose	0	0%
cryovac only	5	100%
Total Responses	5	

Package Weight	# Firms Carrying	%
4 oz	2	50%
8 oz	1	25%
1 lb +	3	75%
1 lb + only	2	50%
Total Responses	4	

Species	# Firms Carrying	%
Sockeye	0	0%
King	1	17%
King or Sockeye	1	17%
Pacific (**)	2	33%
Atlantic	4	67%
Pacific species only	2	33%
Atlantic only	3	50%
Atlantic & Pacific species	1	17%
Total Responses	6	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	2	40%
wild	2	40%
indifferent	1	20%
Atlantic	5	100%
Pacific	0	0%
indifferent	0	0%
pre-sliced	2	40%
uncut	3	60%
indifferent	0	0%

Preferences	# responses	%
portions	1	17%
sides	4	67%
indifferent	1	17%
Scottish style	5	83%
Northwest style	1	17%
indifferent	0	0%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	5	83%
trout	0	0%
whitefish	1	17%
herring	0	0%
mackerel	0	0%
eel	0	0%
bluefish	0	0%
cod / haddock	0	0%
tuna	0	0%
mussels	0	0%
scallops	0	0%
oysters	0	0%
other	0	0%
Total Responses	6	

Best selling smoked salmon	# responses	%
lox	0	0%
nova	1	33%
Scottish style	2	67%
Northwest style	0	0%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	0	0%
Total Responses	3	

Smoked Salmon Sales (Cont.)

Sales Trend – Smoked Fish	# responses	%
Increasing	2	50%
Decreasing	0	0%
Stable	2	50%
Total Responses	4	
Avg. % change	+31.3%	

Sales of Smoked Salmon During Peak Season (lbs/week)
(insufficient sample size)

Sales Trend – Smoked Salmon	# responses	%
Increasing	2	40%
Decreasing	0	0%
Stable	3	60%
Total Responses	5	
Avg. % change	+18.8%	

Sales of Smoked Salmon During Rest of the Year (lbs/week)
(insufficient sample size)

Is There a Peak Season for Smoked Salmon?	# responses	%
No	2	29%
Yes	5	71%
Total Responses	7	

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)
(insufficient sample size)

Peak Season for Smoked Salmon	# responses	%
spring	0	0%
summer	0	0%
Thanksgiving	0	0%
Christmas/New Year	1	33%
Easter	0	0%
other	1	33%
more than one season (*)	1	33%
Total Responses	3	

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$12.00
Minimum	$9.50
Maximum	$15.00
Std Deviation	$2.32
Total Responses	4

(*) - generally Thanksgiving and Christmas/New Year

West

Sample size	197		
# Respondents	124		
% Response	63%	# Responses	
No. of respondents who carry smoked seafood:		29	23.4%
No. of respondents who carry smoked salmon: (*)		27	21.8%
No. of respondents who do NOT carry smoked seafood or smoked salmon:		95	76.6%
Average no. of smoked seafood species carried (including smoked salmon):		2.3	(n= 27)
Average no. of smoked salmon products carried:		2.0	(n= 26)

Smoked salmon product frequency

# products	# firms	%
1	10	38%
2	8	31%
3	5	19%
4	3	12%
>4	0	0%
Total Responses	26	

(*) - No. of respondents carrying smoked salmon among those who carry smoked seafood.

Note: Percentages may not add up to 100 due to rounding off.

Current Smoked Salmon Product Characteristics (*)

Product Form	# Firms Carrying	%
whole	0	0%
uncut portions	2	8%
uncut sides	8	32%
presliced portions	3	12%
presliced sides	16	64%
presliced (unspecified)	4	16%
pate	0	0%
sides only	16	64%
sides and portions	3	12%
portions only	2	8%
presliced sides only	10	40%
Total Responses	25	

Preparation	# Firms Carrying	%
lox	10	40%
nova	4	16%
Scottish style	11	44%
Northwest style	10	40%
peppered	0	0%
cajun	2	8%
gravlax	1	4%
other	2	8%
lox only	5	20%
nova only	0	0%
Scottish style only	5	20%
Northwest style only	4	16%
Total Responses	25	

Packaging	# Firms Carrying	%
cryovac	19	90%
foil	1	5%
loose	2	10%
cryovac only	19	90%
Total Responses	21	

Package Weight	# Firms Carrying	%
4 oz	4	20%
8 oz	3	15%
1 lb +	19	95%
1 lb + only	15	75%
Total Responses	20	

Species	# Firms Carrying	%
Sockeye	1	4%
King	5	22%
King or Sockeye	2	9%
Pacific (**)	10	44%
Atlantic	11	48%
Pacific species only	12	52%
Atlantic only	7	30%
Atlantic & Pacific species	4	17%
Total Responses	23	

(*) - One firm can carry more than one smoked salmon product; therefore, percentages may not add up to 100.

(**) - Pacific refers to unspecified species of Pacific salmon.

Preferences

Preferences	# responses	%
farmed	7	30%
wild	8	35%
indifferent	8	35%
Atlantic	8	40%
Pacific	9	45%
indifferent	3	15%
pre-sliced	15	68%
uncut	6	27%
indifferent	1	5%

Preferences	# responses	%
portions	4	19%
sides	14	67%
indifferent	3	14%
Scottish style	11	61%
Northwest style	7	39%
indifferent	0	0%

Smoked Salmon Sales

Best selling smoked seafood	# responses	%
salmon	19	86%
trout	1	5%
whitefish	1	5%
herring	0	0%
mackerel	0	0%
eel	0	0%
bluefish	0	0%
cod / haddock	0	0%
tuna	0	0%
mussels	0	0%
scallops	0	0%
oysters	0	0%
other	1	5%
Total Responses	22	

Best selling smoked salmon	# responses	%
lox	5	26%
nova	0	0%
Scottish style	5	26%
Northwest style	9	47%
peppered	0	0%
Cajun	0	0%
gravlax	0	0%
other	0	0%
Total Responses	19	

Smoked Salmon Sales (Cont.)

Sales Trend - Smoked Fish	# responses	%
Increasing	3	23%
Decreasing	0	0%
Stable	10	77%
Total Responses	13	
Avg. % change	+6.5%	

Sales Trend - Smoked Salmon	# responses	%
Increasing	8	36%
Decreasing	0	0%
Stable	14	64%
Total Responses	22	
Avg. % change	+8.0%	

Is There a Peak Season for Smoked Salmon?	# responses	%
No	9	38%
Yes	15	63%
Total Responses	24	

Peak Season for Smoked Salmon	# responses	%
spring	0	0%
summer	1	7%
Thanksgiving	0	0%
Christmas/New Year	9	60%
Easter	0	0%
other	1	7%
more than one season (*)	4	27%
Total Responses	15	

Sales of Smoked Salmon During Peak Season (lbs/week)	
Average	811.5
Minimum	2.5
Maximum	4000.0
Std Deviation	1212.0
Total Responses	11

Sales of Smoked Salmon During Rest of the Year (lbs/week)	
Average	263.6
Minimum	2.0
Maximum	1500.0
Std Deviation	506.5
Total Responses	10

Sales of Smoked Salmon When No Peak Season Applies (lbs/week)	
Average	14.3
Minimum	0.5
Maximum	50.0
Std Deviation	17.0
Total Responses	10

Average Wholesale Price (Current) of Top Selling Smoked Salmon	
Average	$11.77
Minimum	$6.50
Maximum	$30.00
Std Deviation	$5.01
Total Responses	20

(*) - generally Thanksgiving and Christmas/New Year